

**The Role of the Developmental State in Northern Ethiopia's Raya Valley  
Groundwater Irrigation Project: An Institutional Economics Perspective**

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## **DECLARATION**

By submitting this dissertation electronically, I declare that the entirety of the work contained therein is my own original work, that I am the authorship owner thereof (unless to the extent explicitly otherwise stated) and that I have not previously in its entirety or in part submitted it for obtaining any qualification.

Date: December 2017

## ABSTRACT

Economists, politicians and bureaucrats can no longer accept the conventional belief that the free-market (neoliberal) development model is the only one that can transform less developed economies and put them on the road to growth and prosperity. Adopting an appropriate development model to promote an African Renaissance continues to be a concern for African politicians, policy-makers and African allies. The unprecedented economic growth of the East and Southeast Asian developmental states makes the developmental state model an interesting alternative in the African context, where successive neoliberal free-market models have failed to spur economic development and free the continent from persistent unemployment and poverty. This study examines how the notion of a developmental state is interpreted in the African context is examined, more specifically, what it means in practice in the Ethiopian context, with specific reference to the case study of the Raya Valley groundwater irrigation project. Based on this case study, the primary question of this research is what does the developmental state mean in the African context? The general objective of was to assess how the developmental state paradigm has determined the institutional environment and arrangements for achieving economic development in Africa. To answer the research questions and to achieve the overall objective of the study, both qualitative and quantitative research approaches were utilised, based on primary and secondary sources, and mixed methods of data analysis.

The literature review in this study the focus is on the mainstream conception of the developmental state and on the concepts that have been developed in the African literature on the subject. The role of the developmental state in promoting development is unquestioned because state intervention is essential to address market failures, and transform the market and capital by integrating the roles of the market and state institutions in the economy. The developmental state paradigm will/can be effective in achieving long-term economic development in many African countries, provided they have committed political leadership as well as context-specific institutions. During this study, it was confirmed that both the internal and external environments (as sufficient and necessary conditions, respectively) are receptive to the adoption of the developmental state ideology in many of the African countries, so long as their respective national economic, political and social contexts are taken into consideration in the process.

Moreover, during this study it was found that the developmental state is a feasible model to realise viable development and transformation because it enables the state to channel the required public investment into critical development projects, and boost the role of the private sector in the development process. The Raya Valley groundwater irrigation case study revealed how the Ethiopian developmental state built context-specific institutions, which enabled it to allocate the required public resources to develop both human capital and physical infrastructure to utilise water resources in a sustainable manner for the betterment of the smallholder farmers, and rural development in general. In this case study, the indigenous/customary institutions received as much attention as the formal institutional arrangements, which strengthened the role of the community in addressing the various communal issues at village level, including the distribution and management of water resources.

## OPSOMMING

Ekonomie, politici en burokrate aanvaar nie meer die konvensionele mening dat die vryemark (neoliberale) ontwikkelingsmodel die enigste model is wat minder ontwikkelde ekonomieë kan transformeer en hulle kan help om te groei en te floreer. Die aanvaarding van 'n toepaslike ontwikkelingsmodel vir die Afrika Renaissance is van groot belang vir politici in Afrika, beleidmakers, asook hulle vennote buite Afrika. Die besonder vinnige ekonomiese groei in die ontwikkelende lande in Oos- en Suidoos Asië maak dat hierdie ontwikkelingssmodel 'n interessante alternatief in die Afrika konteks geword het waar agtereenvolgende neoliberale vryemark modelle gefaai het en nie die kontinent van werkloosheid en armoede kon bevry nie. Hoe die idee van 'n ontwikkelingstaat in die Afrika konteks interpreteer word, word tydens hierdie studie bestudeer, meer spesifiek wat dit in die konteks van Ethiopië beteken en veral met verwysing na die gevalle studie van die Raya Vallei grondwater besproeiingsprojek. Die hoofvraag wat tydens hierdie studie beantwoord word is: Wat beteken die ontwikkelingstaat in die konteks van Afrika? Die hoofdoelwit was om te bevestig hoe die ontwikkelingstaat paradigma die omgewing van instansies en die reëlins vir ekonomiese ontwikkeling in Afrika beïnvloed het. Kwalitatiewe en kwantitatiewe benaderings is gebruik om hierdie vrae te beantwoord en om die doelwitte te bereik. Die benaderings is baseer op primêre asook sekondêre bronne en gemengde metodes van data ontleding is gevolg.

In die literatuuroorsig was die fokus op die hoofstroom siening van die ontwikkelingstaat sowel as op konsepte in die Afrika literatuur. Die rol van die ontwikkelingstaat in die ontwikkeling van die land is onmisbaar want die ingryping van die staat is noodsaaklik om tekortkominge in die mark aan te spreek en om die mark en kapitaal te transformeer deur die rolle van die mark en die staatsinstansies in die ekonomie te integreer. Die ontwikkelingstaat paradigma kan die langtermyn ekonomiese ontwikkeling van baie Afrika lande verseker op voorwaarde dat daar toegewyde politieke leierskap is dat konteks-spesifieke instansies Daar is tydens hierdie studie bevestig dat die interne asook die eksterne omgewings (onderskeidelik as genoegsame en nodige voorwaardes) in baie Afrika lande geskik is vir die ontwikkelingstaat ideologie op voorwaarde dat hulle onderskeie nasionale, ekonomiese, politieke en sosiale omgewings tydens die proses in ag geneem word.

Verder word daar tydens die studie bewys dat die ontwikkelingstaatmodel kan lei tot lewensvatbare ontwikkeling en tot transformasie, want dit maak dit moontlik vir die staat om die nodige geld in belangrike ontwikkelingsprojekte te belê en om terselfertyd die rol van die private sektor in die ontwikkelingsproses te vergroot. Tydens die Raya Vallei grondwater besproeiings gevalle studie is daar bevind dat die Etiopiese ontwikkelingstaat konteks-spesifieke instansies gebou het wat dit moontlik gemaak het om die nodige openbare bronne te gebruik om die menslike, kapitale en fisiese infrastrukture op te bou en om waterbronne op 'n volhoudbare manier te gebruik om die omstandighede van kleinboere en landelike ontwikkeling in die geheel te verbeter. In hierdie gevalle, studie is ewe veel aandag geskenk aan inheemse instansies as aan formele reëlins met instansies. Dit vergroot die rol van die inheemse gemeenskappe veral in dorpieë. Dit sluit die verspreiding en bestuur van waterbronne in.

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## LIST OF ABBREVIATIONS AND ACRONYMS

|         |                                                                                                                     |
|---------|---------------------------------------------------------------------------------------------------------------------|
| ADLI    | agricultural development-led industrialisation                                                                      |
| AMC     | Agricultural Marketing Corporation                                                                                  |
| BCM     | billion cubic metre                                                                                                 |
| BDP     | Botswana Democratic Party                                                                                           |
| CSA     | Central Statistical Agency                                                                                          |
| Das     | development agents                                                                                                  |
| EEA     | Ethiopian Economic Association                                                                                      |
| EPRDF   | Ethiopian People's Revolutionary Democratic Front                                                                   |
| EPZ     | export processing zone                                                                                              |
| ETB     | Ethiopian Birr                                                                                                      |
| FAO-WFP | Food and Agricultural Organization-World Food Programme                                                             |
| FDI     | foreign direct investment                                                                                           |
| FDRE    | Federal Democratic Republic of Ethiopia                                                                             |
| FTCs    | farmers training centres                                                                                            |
| GDP     | gross domestic product                                                                                              |
| GHG     | greenhouse gas                                                                                                      |
| GNP     | gross national product                                                                                              |
| GSIs    | global-standard institutions                                                                                        |
| GTP     | Growth and Transformation Plan                                                                                      |
| HDA     | Health development army                                                                                             |
| HEP     | Health extension Programme                                                                                          |
| HEWs    | Health extension Works                                                                                              |
| HYV     | high yielding varieties                                                                                             |
| ICT     | information communication technology                                                                                |
| IMF     | International Monetary Fund                                                                                         |
| IPE     | institutional political economy                                                                                     |
| ISI     | import substitute industries                                                                                        |
| MCM     | million cubic metre                                                                                                 |
| MDGs    | Millennium Development Goals                                                                                        |
| Mha     | million hectare                                                                                                     |
| MoFED   | Ministry of Finance and Economic Development [Now changed to: Ministry of Finance and Economic Cooperation (MoFEC)] |
| MOH     | Ministry of Health                                                                                                  |
| MoWR    | Ministry of Water Resource (Now changed to: Ministry of Water Irrigation and Electricity)                           |

|        |                                                                 |
|--------|-----------------------------------------------------------------|
| MSEs   | micro and small enterprises                                     |
| MW     | Megawatt                                                        |
| N.A.   | not available                                                   |
| NGOs   | non-governmental organisations                                  |
| NICs   | newly industrialised countries                                  |
| NIE    | new institutional economics                                     |
| ODA    | Organisation of Development Assistance                          |
| OECD   | Organisation for Economic Co-operation and Development          |
| OIE    | old institutional economics                                     |
| PASDEP | Plan for Accelerated and Sustainable Development to End Poverty |
| PIM    | participatory irrigation management                             |
| PSNP   | Productive Safety Net Programme                                 |
| R&D    | research and development                                        |
| ROREs  | rate of return on education                                     |
| SAPs   | structural adjustment programmes                                |
| SDPRP  | Sustainable Development Poverty Reduction Programme             |
| SEZs   | special economic zones                                          |
| SSA    | sub-Saharan Africa                                              |
| TVET   | technical, vocational and educational training                  |
| UNCTAD | United Nations Conference on Trade and Development              |
| UNDP   | United Nations Development Programme                            |
| UNECA  | United Nations Economic Commission for Africa                   |
| US     | United States                                                   |
| WUAs   | water-users' associations                                       |
| WWDSE  | Water Works Development Sector Enterprises                      |

## CHAPTER ONE: INTRODUCTION

### 1.1 Background to this study

The role of institutions in addressing market failures<sup>1</sup> (imperfect information, transaction costs, etc.) to facilitate the development process, particularly in developing countries, has become one of the most debatable areas in development economics. Since the early 1990s, it has become commonplace to blame institutions for the growth and development disparities among countries (Stein, 2008). The debate on economic development is centred on institutions and institutional quality, because weak institutions have been one of the main causes of development failure in many countries and the role of institutions has emerged as a major issue in the development process (Kapur & Webb, 2000). This means that economic theories have tended to focus on identifying the governance capabilities that are required by the state to intervene in the economy (Chang, 1994; 2002; Khan, 2006). Institutionalists acknowledged that state intervention is indispensable to accelerate socio-economic transformation in developing countries through proper state–market integration.

Institutions are a set of formal (market and state institutions), informal and private sector self-regulatory bodies that facilitate coordination and govern relationships between individuals or groups in the economy (Chang, 2002). Institutions constrain people's behaviour, and are constitutive of their motivations and perceptions (Chang, 2002; Chang & Evans, 2005; Hodgson, 2006). Most people in both developed and developing countries prefer informal institutions to facilitate their transactions; however, informal institutions are more important in developing countries where formal institutions are less developed and weak (World Bank, 2002). Developing countries have faced different market failure problems because they have adopted non-context-specific development programmes that have been imposed on them by developed countries under different terms and conditions. For instance, international financial institutions, such as the World Bank and International Monetary Fund (IMF), inaugurated the Structural Adjustment Programmes (SAPs)<sup>2</sup> and the Washington Consensus as rescue packages for crisis-ridden African economies. By the mid-1980s and early-1990s, many African countries had adopted one form of SAP or another. However, these programmes proved to be more harmful than helpful to African countries; in addition, they did not bring any meaningful development outcomes. Instead, these programmes exacerbated the state of crisis in Africa, with

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<sup>1</sup> Market failure (it does not in the notion of a neoclassical) is a situation where the market does not work in a way expected of the ideal market, which is equated with the perfectly competitive market or a frictionless market. For instance, a neoclassical economist would assume that market failure implies economic failure because they assumed that market is the only dominant natural institution in the economy. In contrast, institutionalists regard a market as one of the many institutions that make up the capitalist economic system; market failure may not matter as much because there are many institutions other than markets working in the economy (Chang, 2002).

<sup>2</sup> The SAPs initiated by the international financial institutions during the 1980s to promote a fundamental restructuring of the economies of the countries were presented as being universally applicable development programme to any economy regardless of its overall national context, i.e. the policies were viewed as generalisable under any socio-economic and political condition. These programmes did not leave any room for policies that addressed development issues in accordance with the context of a particular nation (Nissanke, 2001).

the result that the last two decades of the twentieth century are called the ‘lost decades’. This indicates that most African countries spent these years under a ‘one-size-fits-all’ free-market paradigm, which theoretically assumed the existence of a perfect and efficient system. However, as Chang (2002) has pointed out, neoliberal markets are institutionally very under-specified for an immature economy, so the shortcomings would be addressed through state interventions and the nurturing of far-reaching institutions based on the particular contexts of latecomer developing countries.

Real world practice is characterised by numerous uncertainties and risks. Within a world of ‘incomplete’ and ‘imperfect information’, ‘high transaction costs’ and ‘asymmetrically powerful relations’, research suggests that the existence of diverse institutions (i.e. integration of market and state institutions) is necessary to overcome or minimise these uncertainties (Hodgson, 2006). The existence of effective institutions would help to minimise many of the development constraints and to accelerate the development process. However, in practice, most developing countries cannot address the existing development constraints properly because of the absence of effective institutions (Kohli, 2004; Chowdhury et al., 2005; Khan, 2006; North et al., 2007). Differences in economic and political institutions are considered as the main factors in determining the disparities in per-capita or economic growth across countries (Acemoglu & Robinson, 2010).

Institutional bottlenecks, which are considered as a major hindrance to development in many African countries, are the result of practising development paradigms that were imposed upon them by the West during their economic crises of the 1980s and were not fitted their contexts. For instance, the international financial institutions inaugurated SAPs and the Washington Consensus as a panacea for the economic crisis, which limited the role of state intervention in the economy. Peter Evans (1995) notes that neoclassical economists contend that the state’s role should be limited to nothing more than a facilitator of the process (i.e. as a protector of property rights and a contract-enforcement institution). The question is how should these developing countries address the historical legacy of the neoliberal paradigm? As a possible solution proposed by various scholars (from both an institutionalist and a developmentalist perspective) and international institutions is either a paradigm shift to the developmental state (state intervention) or marginal adjustments to the existing neoliberal paradigm. Today, many researchers have assured that state intervention, in the form of the developmental state paradigm, is critical for sustainable economic development and structural transformation (economic, political, and social) in developing countries.

It is clear from the vantage point of the end of the twentieth century that state-led development efforts have been more successful in some parts of the global periphery than in others. States in most peripheral countries of Asia, Africa, and Latin America are important, active economic actors, engaged in varying patterns of state intervention (Kohli, 2004:1). Furthermore, a central concern with the economic role of the state in development really does not require any justification. It is more than an idiosyncratic assertion to hold that states are important economic actors in developing countries and thus worthy of serious scholarly interest even if rates of economic growth reflect a host of other factors (Kohli, 2004:3).

Therefore, marginal adjustments cannot completely address the existing multidimensional problems; rather, a complete paradigm shift would be necessary to address the existing development constraints and accelerate

the development process. Recent arguments have confirmed that Africa, as a continent, would make a dynamic socio-economic structural transformation under a context-specific developmental state model rather than marginal adjustments to the existing neoliberal model (Mkandawire, 2001; UNECA, 2011).

Scholars define and describe the term ‘developmental state’ in various ways because there is no one all-inclusive agreed definition of a developmental state. The available alternative definitions differ because of their disciplinary emphasis (i.e. economics, political science, public policy, education, sociology, etc.) and their respective contexts in terms of time and geographic coverage. These definitions of a developmental state essentially put an emphasis on how and to what extent state actors are involved in forging economic development, but the role of state has not always been perceived positively. The concept of a developmental state is often associated with the type of economic policies followed by East Asian states in the second half of the twentieth century and, in particular, with the post-Second World War Japanese economic model. It could be understood as referring to a state that intervenes to guide the direction and pace of economic development (Caldentey, 2008).

Hence, the concept of a ‘developmental state’ was justified and formalised with the publication in 1982 of Chalmers Johnson’s seminal work on East Asian developmental states, and particularly Japan. Johnson coined the term ‘developmental state’ in his study on the role of industrial policy in Japan’s development achievements, which was based neither on Soviet-type ‘command economies’ nor on the ‘laissez-faire free market economies’ of the West, but on market-conforming (integration of market and state) methods of state intervention (Johnson, 1982; 1999). Johnson (1982) formally defines a developmental state as follow: “A developmental or plan rational state intervention is one that is determined to influence the direction and pace of economic development by directly intervening in the development process, rather than relying on the uncoordinated influence of market forces to allocate the scarce economic resources” (Johnson, 1982:319–20).

Swilling and Annecke (2012) strengthen Johnson’s explanation of the concept of the developmental state. Since the 1960s, following the construction of Japan and Taiwan after the Second World War and then the rapid development of the ‘Asian Tigers’, there has been a third governance trend that is neither ‘Keynesian welfarism’ nor ‘neoliberalism’; instead, it could be referred to as a ‘developmental state’. Developmental states have tended to be interventionist, ideologically opportunist and protectionist, resource intensive, obsessed with industrialisation and, quite often, authoritarian (Swilling & Annecke, 2012). Nevertheless, not all developmental states are authoritarian – some are both developmental and democratic, and these have referred to as ‘democratic developmental states’. Following the classic concept coined by Johnson, Chang defined a developmental state in institutional perspective as:

One that pursues policies focused on coordinating investment plans; has a national development vision; takes the goals of long-term growth and structural change seriously; engages in institutional building to promote growth and development; and plays a critical role in resolving the conflicts that arise out of reactions and counteractions to the development trajectory between winners and losers (Chang 1999:192–9).



The concept of a developmental state also described in economic perspective as it is:

A state puts economic development as the top priority of governmental policy and is able to design effective instruments to promote such a goal. The instruments would include the forging of new formal institutions, the weaving of formal and informal networks of collaboration among the citizens and officials and the utilization of new opportunities for trade and profitable production (Bagchi, 2000:398).

This definition indicated that a developmental state as one that gives top priority to rapid economic growth, adopts workable policies and strategies, and designs effective instruments to achieve these development policies and strategies in a successful manner (Onis, 1991; Bagchi, 2000; Fritz & Menocal, 2006; UNECA, 2011; Bekele & Regassa, 2012). Moreover, Adrian Leftwich also defines developmental states from a political perspective as ‘those states whose successful economic and social development performance illustrates how their political purposes and institutional structures (especially their bureaucracies) have been developmentally-driven, while their development objectives have been politically-driven’ (Leftwich, 2008:12). Furthermore, a more comprehensive definition, which covers major aspects of the concept of a developmental state, is given by Edigheji, who sees it as one that:

... Authoritatively, credibly, legitimately and in a binding manner is able to formulate and implement its policies and programmes. This will entail possessing a developmentalist ideology. Such a state also has to be able to construct and deploy the institutional architecture within the state and mobilize society towards the realization of its developmentalist project (Edigheji, 2010:4).

This comprehensive definition looks at the ideological and institutional dimensions required to realise economic development. This definition points to the fact that a developmental state is one that promotes macroeconomic stability and establishes well-functioning institutions; it invests in infrastructure and the development of human capital through effective social-sector development programmes (Mkandawire, 2010). A developmental state is strongly associated with a strong element of nationalism as the basis for the ideology, which guides development-oriented governments to realise the overall socio-economic development to ensure the well-being of the nation. Furthermore, the developmental state is often described in terms of its ideological orientation, which promotes the developmental agenda, and its institutional arrangements, including institutional capacity, to articulate and implement its development policies and strategies (Mkandawire, 2001; Edigheji, 2005, 2010). A developmental state is acknowledged further as one that has the capacity to deploy its authority, credibility and legitimacy in a binding manner to design and implement development policies and programmes that promote transformation by expanding human capabilities (Benedict, 2014).

There are plenty of literatures produced by various scholars and international organisations, which gave emphasise on the importance/the role of state intervention within the developmental state paradigm. More recently, there has been consensus on the ineffectiveness of the neoliberal paradigm in both developing and developed countries. Scholars have recommended a new alternative development paradigm (i.e. a developmental state) for the latecomer countries to achieve their socio-economic transformation and sustainable development processes through proper, state–market integration approach. As the success story

of the East Asian developmental states bear out, a developmental state is essential to accelerate socio-economic transformation in latecomer developing countries and ensure well-functioning institutional environments and arrangements.

In the twentieth century, many of the East Asian developmental states were obviously authoritarian in practice in their governance approach. They gave priority to economic development and socio-economic improvement at the expense of democracy and building democratic institutions (Mkandawire, 2001; Edigheji, 2005; Fritz & Menocal, 2007). A major weakness of the twentieth-century developmental states was that their coalition was not broad-based, inclusive, and comprehensive of all stakeholders; rather their coalition was limited to the state–private sector. Broad-based coalition/cooperation with the society (or all stakeholders) at different levels would, therefore, be one of the crucial instruments necessary to build a successful developmental state model in developing countries. A developmental state model with broad-based coalitions would ensure popular participation in the process of economic development (Barbara & Terrance, 1997; Mkandawire, 2001; Fritz & Menocal, 2007; UNECA, 2011).

Developmental states differ from one another in their origin, evolution, context, trajectory, leadership style, nature and extent of intervention, prioritisation of development agendas, manifestations and institutions. There are different characteristics in the emergence and nature of developmental states around the world and ‘one-size-fits-all’ approach cannot be applied when building a developmental state paradigm. Developmental states have emerged largely through ‘trial and error’ or ‘learning-by-doing’, based on their own respective contexts; there is no universally designed template for aspiring countries to copy (Evans, 1995; Mkandawire, 2001; Kohli, 2004; Evans, 2010; Mkandawire, 2010; UNECA, 2011). However, this does not mean that developmental states have nothing in common: they all share a principal development policy objective to achieve rapid economic growth by means of active state intervention, and they make a considerable effort to meet this objective. Thus, despite differences in their economies and overall development approach, the East Asian developmental states share some common features and serve as an example of good practice (UNCTAD, 2007).

The twenty-first-century developmental states will build on the experiences of others, but unreflective imports of ready-made models are likely to fail (Evans, 2010). Essentially, each country should adopt the paradigm based on their unique context, such as their historical endowments and the character of the surrounding social, economic, political, and institutional structures. The ability of developmental states to execute their roles depends on the ‘embedded autonomy’ of the state bureaucracy. ‘Embedded autonomy’ combines Weberian bureaucratic insulation with intense connection to the surrounding social structure, offering a concrete resolution to the theoretical debate over state–society relations (Evans, 1995: 51). ‘Embedded autonomy’ requires strong state–society relationships, strong commitment, and efficient bureaucracy with the ability to execute developmental goals. Without ‘embedded autonomy’, a developmental state is not in a good position to facilitate and accelerate economic development (Evans, 1995). More recently, the concept of the developmental state has become paramount in contemporary

development literature; it is now accepted as being one of the most common developmental paradigms to accelerate economic growth. Developmental states arise from an urgent need to promote economic growth and industrialisation to improve the well-being of the population. This helps a country to protect itself from global or regional threats, and to gain legitimacy and credibility by delivering steady improvement in the material and social well-being of its citizens (Evans, 1995; Mkandawire, 2001).

To summarise, institutions that are associated with the emergence of the developmental state have become entrenched because they are associated with the transformation of the economy from poverty and social dislocation to prosperity. The institutional architecture of a developmental state plays a crucial role in its success or failure. A country's institutions are considered as good indicators of its ability to formulate and explain its developmental programmes and implement these in a credible and legitimate manner to achieve the overall development goals (Edigheji, 2010). Nevertheless, the developmental state paradigm is not an end in itself – it is considered to serve as a springboard for further development and as a means to attain specific development goals (for instance, to transform the economy from a low-income level to a middle-income level) in a given period (Mkandawire, 2010). The attraction of the developmental state paradigm is that it places responsibility on the respective states to direct the development process for the betterment of their citizens. Therefore, state intervention within the developmental state paradigm would be considered as a panacea to the problems related to poverty, backwardness, inequality, and the high levels of unemployment, which are the main economic problems in many African countries.

## **1.2 An overview of Ethiopia's development policy and strategy**

From 1991, the Ethiopian state has tried to adopt an ideological position that commits it to embarking on a transition from being a predatory and quasi-failed state to being a protective and developmental state (Negash, 2011; Nishi, 2013). This implies that the year 1991 is considered as a turning point for Ethiopia with regard to the social, political, and economic changes that became possible after the military government removed from power. During the military regime, the country suffered under a command economy that had closed itself off from the external economy. There was no appropriate policy and strategy to achieve economic development and living conditions were poor because of both market and government failures (Teshome, 2012; Melke, 2013). The current ruling party, the Ethiopian People's Revolutionary Democratic Front (EPRDF), launched pragmatic development policies and strategies that relatively fitted within the Ethiopian context to boost economic development and address the persisting socio-economic problems. Since mid-1990s, the government has formulated and implemented various economic policies and strategies to re-energised the agricultural sector and to accelerated overall economic development by strengthening the forward and backward linkages among the various sectors. This occurred in the form of an agricultural-centred development programme known as the Agriculture Development Led Industrialisation (ADLI), which was formulated in the mid-1990s (MoFED, 2002b). The ADLI aims to achieve industrialisation over the long-run through robust agricultural growth and boost the forward and backward linkages between

agricultural and industrial sectors. In other words, the ADLI sets agriculture as a primary stimulus to increase output, employment, and income; it is also considered as a crucial springboard for the development of the industrial sector through its positive spill-over effect (MoFED, 2002b; Ohno, 2009).

The rationale behind the adoption of ADLI is the recognition by the Ethiopian state that Ethiopia is an agrarian society in which over 80% of the rural population depends on agriculture. This sector accounts for 40% of the gross domestic product (GDP) and is a huge source of commodity exports. Labour and land are the predominant factors of production; efficient mobilisation of these factors would generate rapid development in general and rural transformation in particular. All development actors (such as government, donors, farmers and their organisations) have expected to make deliberate efforts to transform the agricultural sector and laid the foundation for process of industrialisation. Therefore, the adoption of the ADLI as the national, long-term development policy has contributed to socio-economic transformation and sustainable development. For instance, the proportion of the population living below the poverty line was 44% in 1999/2000 (MoFED, 2002a). This was reduced to 29.2% by the end of 2009/10 (MoFED, 2010; CSA, 2012; World Bank, 2012) and furthermore, this declined to 26% in 2013 (UNDP, 2015).

Agriculture is a major source of employment and income in many sub-Saharan African (SSA) countries, so promoting the agriculture sector is the only way to overcome abject poverty. In other words, raising agricultural productivity and production using modern agricultural inputs (such as chemical fertilisers, insecticides, pesticides and irrigation), as well as the rapid accumulation of capital from the sector and diffusion into labour-intensive sectors can enhance growth substantially and ensure that the fruits of prosperity are inclusive and more broadly shared. Smallholder farmers are more efficient in the allocation and use of resources (compared to large-scale commercial farms) so supporting smallholder farmers will enhance equity as it increases returns on their assets. Reaching out to smallholder farmers and changing the agricultural sector are important components in the alleviation of poverty and the reduction of inequality in developing countries. The Ethiopian state attempted to show its commitment to accelerated economic growth and lifting people out of poverty, which is one of the widespread economic problems. To achieve this, the government has tried to allocate considerable resources to agriculture, health, education, water supply and other basic infrastructure to boost the socio-economic prospects of the nation.

Under the ADLI's development policy, emphasis is placed on the transformation of smallholder subsistence farming to more business- and market-oriented agricultural production. This is being achieved by boosting agricultural extension services that promote the adoption of improved agricultural inputs and practices, as well as the expansion of small- and large-scale irrigation schemes and rural credit services to address farmers' financial constraints. Furthermore, integrating farmers with markets, expanding rural roads and electrification efforts are expected to have a further positive effect on smallholder farmers by reducing their vulnerability to shocks (MoFED, 2002a). In line with the basic objectives of the ADLI's long-term development policy, the following four successive mid-term development programs have been put in place:

1. An Economic Development Strategy for Ethiopia (EDSE), 1996/97 to 2000/01;
2. Sustainable Development Poverty Reduction Programme (SDPRP), 2002/03 to 2004/05;
3. The Plan for Accelerated and Sustainable Development to End Poverty (PASDEP), 2005/06 to 2009/10;
4. The Growth and Transformation Plan (GTP-I), 2010/11 to 2014/15.

It is clear that the economic growth of Ethiopia began to improve during the 1990s, but since the state officially claimed a ‘developmental state’ in the early 2000s, the economy has shifted into a higher and more rapid growth trajectory. In both the SDPRP and PASDEP mid-term development plans, agriculture was considered as a strategic sector for poverty reduction and this changed the livelihoods of the rural residents. Under PASDEP, greater emphasis was given to the expansion of medium- and large-scale irrigation schemes, the commercialisation of agriculture, diversification, and private-sector investment in order to move farmers beyond subsistence farming to market-oriented practices, and boost the export sector (Ohno, 2009). During the planned period, the government called for the decentralisation of the delivery of basic social services to improve governance issues, reduce social vulnerability and improve social security, and it increased public expenditure in the rural-development programme in general, and the agricultural sector in particular (MoFED, 2006). Even though the agricultural sector is considered as the engine for the Ethiopian economy in the current, mid-term, five-year development plan, the industrial sector is also receiving particular attention. The expansion of this sector will be promoted based on both export-oriented and import-substituting strategies to satisfy export requirement as well as domestic demand. Therefore, the government’s efforts to eradicate poverty and expand development opportunities will depend on it being able to maintain rapid and broad-based economic growth in a coordinated manner (MoFED, 2010). Accordingly, the GTP plan has the following major objectives:

- ➡ To maintain an average double-digit GDP growth rate and meet the Millennium Development Goals (MDGs);
- ➡ To expand and ensure the qualities of education, health and other social sectors thereby achieving the MDGs;
- ➡ To establish favourable conditions for building a sustainable state by creating a stable democratic developmental state;
- ➡ To ensure sustainable growth within a stable macroeconomic framework;

As the World Bank (2012) report confirmed that, due to formulating and implementing these consecutive five-year mid-term development plans, the Ethiopian economy has been growing at twice the rate of the SSA, averaging 10.6% GDP growth per year compared to 5.2% in SSA over the past decade. As the report further indicated, modernising smallholder agriculture, the development of new export sectors, strong global commodity demand, and government-led development investments, and so on, are the factors that have contributed to this impressive economic growth. This impressive economic growth has been a characteristic

pattern of the national economy for the past decade and now the government is committed to sustaining this economic growth rate with the aim of joining the middle-income club by the mid-2020s (MoFED, 2010).

The state is committed to play a major role in keeping the economy close to the leading edge in the development of knowledge and technology by investing in a human development programme. It believes that this will be achieved by pursuing an intensive human capital development programme under its officially claimed ‘developmental state’ model, based on the good practices of similar developmental states in the Global South (Habisso, 2010). The government claimed a ‘developmental state’ model as its official ideology in the early 2000s in order to address abject poverty and to facilitate the overall development process. As a result, Ethiopia has embarked on a reform programme that is based not on the neoliberal paradigm but on the establishment of a developmental state model specifically tailored to the Ethiopian context. The key objective is to transform the pervasive rent-seeking political economy to a favourable value-creation political economy (Zenawi, 2006; Ohno, 2009). This implies that the Ethiopian state claimed the ‘developmental state’ model after evaluating the impacts of SAPs for about a decade. State intervention in a developmental state, adapted to the specific context, is indispensable for creating fertile ground for building efficient market by boosting public investment in infrastructure development and nurturing context-specific functional institutions.

In line with the ideological shift towards a ‘developmental state,’ public-sector investments are targeted at a few productive sectors to create a new economic platform for sustainable economic growth and development. As Teshome (2012) explains, since the break from the less pragmatic neoliberal economic policies, the state has developed and implemented economic policies and strategies based on the country’s socio-economic and political contexts to satisfy the development requirements of the nation. Instead of the neoliberal emphasis on ‘getting the prices right’, the focus is now on specific ‘binding constraints’ that must deal with intensive state-synchronised action, including institutional change, targeted regulation and intervention, strategic policy-driven public investments and other intervention instruments that run contrary to neoliberal prescriptions. Accordingly, the country has set itself the ambitious goal to become a fully-fledged developmental state, seeking to create a middle-income society and build a green economy to reduce the impact of climate change (MoFED, 2010; FDRE, 2011).

### **1.3 Rationale of the study**

The issue of state intervention in the economy is not in question because state intervention is critical in addressing market failures, and promoting market and capital transformation in both developed and developing countries. Almost all states around the world intervene, either directly or indirectly, at some stage to varying degrees for various reasons. The question is what type of intervention and to what extent is the intervention conducive to promoting the development process? This means that how the state intervenes and for what purpose lies at the centre of the debate (Johnson, 1982; Swilling & Annecke, 2012). The history of the twentieth-century developmental state has shown that an appropriately configured and governed state has



a key role to play in the development process through the proper mobilisation of resources. However, to conceptualise the role of developmental state for a very different context, one needs to recognise that the twenty-first-century developmental state sits at the intersection of the simultaneous transition that is taking place at the industrial and socio-ecological scales (Swilling & Annecke, 2012). Since the start of the 2007/08 financial meltdown in the United States, the notion of a developmental state has returned to the centre of the discussion about the global political economy. The role of state intervention is regaining a necessary relevance in both developed and developing countries (UNECA, 2011). The economic crisis presented evidence that unregulated markets are unworkable and unsustainable in the long-run, particularly in developing countries. It has reinforced the proposition that markets are not always self-regulating and that state intervention is crucial; it has also given credence to those who argued for state intervention and made a more convincing case for a developmental state paradigm (Edigheji, 2010).

In most of the literature, the term ‘developmental state’ is associated predominantly with success stories of the East Asian developmental states, which have achieved prolonged and impressive high economic growth and realised social transformation in approximately three decades (Bagchi, 2000; Mkandawire, 2001; Meyns & Musamba, 2010). Over this period, a set of city-states and countries, including Hong Kong, Singapore, South Korea, and Taiwan, underwent rapid economic growth and essential socio-economic changes. They moved from being poor, agrarian societies to producers of high technology and high value-added goods based on the export-oriented development strategy (Page, 1994; Kohli, 2004; Fritz & Menocal, 2006). However, this narrow regional focus on the concept of developmental states is contested in different ways and by many scholars. For instance, Mkandawire argues that there were developmentally focused states in Africa in the immediate post-colonial period and that the two most cited examples of ‘democratic developmental states’, namely, Botswana and Mauritius, are from Africa (Mkandawire, 2001).

When thinking about building a developmental state that fits the context, it is important to take into account the institutional architecture and development policy orientation of that particular country. A developmental state’s capacity to formulate and successfully implement its development policies and programmes are determined by the existence of context-specific and well-functioning institutions; these can be deployed to mobilise the society around the common development objectives. Therefore, the concept of a developmental state paradigm is understood in terms of the political, ideological and institutional aspects of that particular country rather than a ‘one-size-fits-all’ approach (Evans, 1995; Mkandawire, 2001; Kohli, 2004; Edigheji, 2005; 2010).

A developmental state may set performance targets (such as ‘carrot’ and ‘stick’ instruments) to reduce inefficiency and wastage of resources, and to distribute economic rent through effective public policy to increase productivity and production in the economy. It may reward (‘carrot’) those who meet the targets and punish (‘stick’) those who do not to minimise the wastage of public resources and rent-seeking practices (World Bank, 1993; Stiglitz & Yusuf, 2001). ‘Carrot’ and ‘stick’ are key instruments to mobilise, utilise, distribute, and manage existing scarce resources (natural, human, capital, and others) in the economy. By

using these instruments effectively, a developmental state is able to boost its legitimacy and credibility, and retain power long enough to implement its long-term development policies and programmes in a sustainable manner (UNECA, 2011).

Furthermore, successful developmental states coordinate investment plans in such a way that they ‘crowd in’ rather than ‘crowd out’ the private sector in the development process. Such ability of the state to accommodate the role of the private sector in the economy differentiates developmental states from other state-intervention approaches (Gumede, 2009). To promote the process of sustainable economic development and transformation, developmental states pay due attention to the issues of efficient resource mobilisation and allocation by improving their institutional and bureaucratic capabilities (Kohli, 2004). Visionary and pragmatic leadership (i.e. a developmental leadership) is considered as a hallmark of a developmental state. The state bureaucracy needs to be insulated from political pressures and should have the capacity to manage economic interests effectively (Leftwich, 1995; Gumede, 2009). The notion of a developmental leadership is not about building personality cults or strongmen, rather it is about providing clear direction for socio-economic changes, creating a powerful pro-developmental constituency in the ruling and bureaucratic elites, and harnessing the critical economic and social forces in the economy (UNECA, 2011).

During the post-colonial era, Africa has had examples of countries whose ideological inclination was developmental and who pursued policies that produced high rates of economic growth, achieved social gains and accumulated human capital. Nevertheless, many of these were not successful (except Botswana and Mauritius) due to different internal and external factors (Mkandawire, 2001; Fritz & Menocal, 2006; UNECA, 2011). Therefore, most of the literature on the developmental state lacks the confidence to recommend the applicability of the success stories of the East Asian developmental states to African countries. This lack of confidence emanated from different internal and external factors, as well as from contextual differences in the East Asian developmental states.

Accordingly, this study is motivated by the observation that a developmental state paradigm and institutions are receiving more attention for long-term economic growth and development especially in developing countries of Africa. The demand for the developmental state paradigm originated partly from the success stories of the East Asian newly industrialised countries (NICs) and from the failure of the previous neoliberal paradigm to transform the economies of these developing countries. Given that there is an emergence of states in Africa that are defining themselves as ‘developmental states’, it is necessary to assess these claims critically in the light of the literature on the developmental state, particularly from an institutionalist perspective. Furthermore, this study emphasises on how the developmental state paradigm realised that context-specific institutions – even at the grassroots level – accelerate rural socio-economic development and sustainable resource mobilisation, utilisation and management. This was particularly evident in the Raya Valley groundwater irrigation project in Northern Ethiopia.



## 1.4 Problem statement

Developing countries in general and African countries in particular face daunting market failures and institutional inadequacies, which, in turn, create vicious circles and poverty traps in their economies. This means that many African countries are characterised by inadequate infrastructure, and a lack of strong institutions and bold development plans to manage complex economic policies and strategies. Market failures and institutional bottlenecks can be adequately addressed only through active state intervention by means of a selective and strategic approach; the historical practices in the East Asian countries serve as a good example here (Akyuz et al., 1998; Chang, 2002; Dorward et al., 2003; Hodgson, 2006; Meyns & Musamba, 2010). The economic crises of the 1980s, accompanied by the ideological shift against the role of state intervention in the economy, seriously aggravated the economic problems of many African countries (Akyuz et al., 1998; Meyns & Musamba, 2010).

For instance, from the beginning of the colonial period to the pre- and post-reform periods of independence, the institutions and investments that are required to bring technological changes to agriculture in particular (which is the main economic sector) have been markedly absent or weak in Africa. More specifically, the adoption of the neoliberal paradigm (drive towards liberalisation and privatisation) as a panacea for the economic crisis (the debt crisis) resulted in pervasive market failures in many African countries. The neoliberal paradigm almost failed and did not bring about the expected outcome in many of these countries (Mkandawire, 2001; Chang, 2002). All these situations probably made it difficult to recommend complex long-term economic policies and strategies for these countries for a considerable period in the past. Nevertheless, this does not mean that these countries should not consider any long-term economic development policies and strategies based on their unique contexts today. Africa is not in the same position as it was in the twentieth century – it is now starting to registered fast economic growth and many countries are joining the middle-income club.

Regardless of constraints, the development policy agenda in Africa today focuses on changing the existing weak economic and political situation and improving the well-being of African nations. However, one of the biggest challenges facing many of these countries is the absence of a contextualised development paradigm to articulate workable development policies and strategies, and to nurture far-reaching institutions (Dorward et al., 2005; Dorward et al., 2009). By recognising these problems, some African countries have made a paradigm shift away from a neoliberal to a developmental state approach to transform the existing weak socio-economic and political situations (Mkandawire, 2001; 2010; UNECA, 2011). Adopting a context-specific developmental state paradigm should help to progressively address these development constraints through efficient resource mobilisation and management, given effective institutions. Therefore, based on theoretical and the historical evidence, it has become clear that the developmental state paradigm – and the importance of the state's role – is necessary if the latecomer developing countries are really committed to achieve meaningful economic transformation in a specific period (Chang, 1999). It has also become obvious

that neoliberalism, advocated by the West and its international financial institutions as a panacea to the African problem, has failed to bring about the anticipated development and transformation.

Based on the officially claimed developmental state paradigm, therefore, Ethiopia started to implement different development projects in the form of public investment at both the macro and micro levels. One of the many projects is the Raya Valley groundwater irrigation scheme (the case study) located in northern Ethiopia of Tigray regional state, which was implemented to protect/guarantee the drought-prone area at the grassroots level. There is no doubt that this type of public investment at the grassroots level is essential for the smallholder, rural farm households to improve their productivity and alleviate poverty, and improve the agricultural sector in general. In the light of this, this dissertation seeks to investigate how the notion of a developmental state is interpreted in the African context. More specifically, what does it mean in practice in the Ethiopian context, with specific reference to the case study of the Raya Valley groundwater irrigation project.

## **1.5 Research questions**

The research questions are constructed around the above stated problem. The primary question for this study is what does the developmental state mean in the African context? Following on this, the specific research questions are:

- ❖ What is the mainstream conception of the developmental state in relation to institutions and institutionalisation, as articulated in the international literature on the developmental state?
- ❖ What conception of the developmental state has been incorporated into the Ethiopian state's official development ideology, as reflected in both its official documents and the written perspectives of its key representatives? Is Ethiopia's conception of the developmental state adequate for the context in the light of the international and African literature on the subject?
- ❖ How has Ethiopia's conception of the developmental state, as articulated in its official development ideology and its key representatives, influenced and shaped the way in which the state has assembled the institutional arrangements and practices in the Raya Valley groundwater irrigation project? Is there evidence of a direct relationship between Ethiopia's conception of the developmental state and the actual institutional arrangements and practices in the Raya Valley project? What are the successes and challenges of the Raya Valley project?

## **1.6 Objectives of the study**

The general objective of this study is to assess how the developmental state paradigm has both influenced and determined the institutional environment/arrangements for achieving economic development in Africa. A case study of the groundwater irrigation project in Raya Valley region examines the potentials and the limitations of these institutional environments/arrangements related to resource utilisation and management. Based on this general objective, this study has the following specific objectives. These are:

- To provide a detailed review of the theory of institutions and developmental state paradigm
- To provide a detailed review of the role of the developmental states and institutions for achieving economic development in Africa
- To assess the role of the emerging developmental state in economic development and building context-specific institutions in the context of Ethiopia
- To investigate the role of a developmental state and the existing institutional arrangements for sustainable utilisation and governance of groundwater irrigation in the Raya Valley

## 1.7 The conceptual framework of the study

The development models/ideologies, policies and strategies of developing countries are derived, directly or indirectly, from the developed world, and attempts are made to make developing countries resemble the developed ones, regardless of their differences in context. In most cases, there is a discrepancy between seeking to address the development constraints and the available development policy tools, which developing countries have adopted. The development policies and strategies that emulated in developing countries without regarding to their unique contexts are incompatible to achieving their development agenda. This emulation of development policy practices is not yet regarded as a problem because it is common practice in our globalised world. The real problem with is that many developing countries do not contextualise these to fit their own specific situations, as per their development requirements.<sup>3</sup> The adoptions of these development policy practices are significant only if they take into consideration the wider social, economic, and political context of the adopting countries. In the first place, to adapt any development model and to design workable development policies requires an understanding of how the socio-economic and political contexts of developing countries differ from those of developed countries. A developing country needs to articulate its development policies based primarily on its unique national context, and the existing international situation, to accelerate its development process (Kohli, 2004). However, the development efforts in developing countries are challenged by their capability/capacity to design contextualised policies, strategies, and implementation tools. This requires the commitment of the political elites and the autonomous state bureaucracy to formulate context-specific policies and strategies, and then apply these in accordance with their development objectives.

Developing countries need forms of political governance that enable them to transform their economies rapidly and sustainably to improve the social well-being and human capabilities of their citizens (Booth, 2012). The developmental state is expected, by definition, to achieve rapid and sustainable development by

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<sup>3</sup> “Development must, therefore, be conceived as a multidimensional process involving changes in social structures, popular attitudes and national institutions, as well as the acceleration of economic growth, the reduction of inequality and the eradication of poverty. Development, in its essence, must represent the whole gamut of change by which an entire social system, tuned to the diverse basic needs and evolving aspirations of individuals and social groups within that system, moves away from a condition of life widely perceived as unsatisfactory toward a situation or condition of life regarded as materially and spiritually better.” (Todaro & Smith, 2012:16).

taking these as its main goals. In other words, the aim of a developmental state is to accelerate economic development that substantially raises the average GDP per capita with the emphasis giving to industrialisation and urbanisation. Since a free-market approach in the real world is very far from being ‘perfect’ (though ‘perfect’ in theory) both in developed and developing countries, the role of a developmental state approach remains indispensable for developing countries (Chang, 2003a). The developmental state is crucial to tackle major infrastructure bottlenecks, to improve human capital status and to nurture far-sighted institutions to accelerate the development process by effectively mobilising domestic resources in the form of public investment (Evans, 1995; Kohli, 2004).

The emergence of the developmental state theory into the state ideology indicates a detachment from the conventional neoliberal ideology and the involvement of directed state intervention in the economy. It assumes that this interventionism does not handicap socio-economic development; rather supports a developmental trajectory for economic transformation (Kohli, 2004; Bolesta, 2007). The developmental state has to pay considerable attention to the capacity of the state to make development happen, and focus on creating a developmental-oriented bureaucracy and well-functioning institutions. Since the late-1990s, the focus of developmental states has shifted from massive investments in material conditions of modernisation to establishing well-functioning institutions and a knowledge economy created by the information revolution (Chibber, 2002). As argued by numerous authors, successful developmental states build on the market-conforming or market-friendly development approach by adopting diverse institutions, because in the real world, either the supremacy of market or the state approach is imperfect, especially in developing countries. As UNCTAD (2007:61) asserted, the situation is that ‘neither the “market” nor the “State” can by itself deliver the ultimate goal of development. The real path to sustainable growth and development emanates from a pragmatic mix of markets and state action, taking into consideration the country-specific development challenges.’

Based on this, a developmental state is about seeking the right mix of state and market, governing the market and market forces to prevent market failure, creating capital transformation and new market opportunities, and supporting the private sector to realise its potential to create economic growth. This indicates that state intervention in a developmental state is not an obstacle to socio-economic development; instead, it supports the developmental trajectory by nurturing well-functioning diverse institutions (Bolesta, 2007). The existence of diverse institutions is an important element of the developmental state. It facilitates cooperation between the private and public sectors – or the state and society – and contributes to better economic performance by minimising market and governance failures to mobilise resources for development purposes (Johnson, 1999). Many of the East Asian developmental states were authoritarian, but this does not imply that all authoritarian regimes are developmental, or that states need to be authoritarian in order to be developmental. Instead, there are many examples of anti-developmental/non-developmental authoritarian states in the developing countries of Africa and Latin America and, similarly, there are states that officially claimed to be ‘democratic developmental states’ (Fritz & Menocal, 2006). However, the emerging

developmental states in the twenty-first century have an opportunity to achieve economic development in a more democratic approach than the previous Asian developmental states, given their contextual differences and today's global environment.

Achieving substantial economic development is not an easy task; it is obviously a challenging issue, and it needs more committed political leadership and well-functioning, diverse institutions. Institutions do not work in a vacuum – they need to be integrated into the economy. Far-reaching and strong institutions are crucial to achieve robust economic development and they are always shaped by the political, social and economic contexts of their particular nation; institutions cannot be imported directly (in a direct copy and paste approach) from developed countries because the terms and conditions are quite different. For instance, a fundamental contextual variable across African states is the shape of political 'clientelism' and the way in which rents are managed (Booth, 2012). Internal political, economic, and social transformations are crucial factors for strengthening the role of the developmental state and accelerating the development process in a given nation.

Aspirant developmental states in the twenty-first century will pursue their developmental roles effectively in a broad-based participatory approach through the involvement of all stakeholders, subject to their own context-specific institutions and competent bureaucracy. The developmental states need to provide incentives for economic actors to invest in their own capabilities by providing basic social services to enhance the capability of the citizenry. In addition, the developmental states must define the developmental goals then make them a priority (Evans, 2010). However, the role of strong institutions in the field of economics is also extremely important, and the recognition of this has fed into the reassessment of the role of the state from an economic perspective. Strong state institutions with the capacity to promote economic growth – without being captured by interest groups – are seen as essential elements of the developmental state (Evans, 1995). Therefore, this study departs from the theoretical argument of the institutional political economy (IPE), which says that the existences of diverse institutions in the economy affects the market and, in turn, are affected by the market. In other words, the market is not the only institution that determines the fate of the given economy; rather there many institutions in the economy that determine the fate of the given economy (Chang, 2002; 2003a). Having a variety of institutions can help to facilitate the process of economic growth in a developmental state. Institutions govern the interaction between individuals and groups, and are constitutive of their motivations and perceptions. Negotiating, monitoring and enforcing such relationships are, therefore, a key aspect of institutional analysis (Chang, 2002; Herrera, 2006). As Edigheji (2010:5):

The institutional architecture of the developmental state is crucial to its success and institutions that determine the capacity of the state. In particular, it is the institutional arrangements that are in place that explain the state's capacity to define its developmental agenda and to formulate and implement policies in a legitimate and credible fashion towards the attainment of its goals. In designing institutions, however, a developmental state has to build distinctive capacities to achieve its various developmental goals. Ideally, a state with strong institutional arrangements would have good working relationship with non-state actors such as the private sector, civil society, trade unions, and even the society as a whole.

This study focuses on the role of developmental state from an institutional perspective, based on the theoretical and empirical review of the literature on the subject. In addition, it examines the role of the developmental state at the grassroots level through a case study of the Raya Valley groundwater irrigation project in Ethiopia. This is a public investment project operated by the Ethiopian state, based on its officially claimed developmental state ideology. It is clear that institutions need to create an environment that is conducive to state intervention to promote market-friendly state capitalism by addressing the pitfalls of the perfect market ideology. In turn, the state also plays its role in building well-functioning, legitimate institutions, as well as improves the quality of institutions to facilitate and promote economic development.

In many developing countries, policy, institutions and social factors than technical factors such as physical investment (Gebremedhin & Peden, 2002) affect the success of irrigation projects more. This indicates that institutions play a decisive role in the success of public-investment projects in developing countries. Irrigation development and management is moving towards a partnership between governments, farmers and their water groups, such as water-user associations, for the sustainable utilisation of the resource. Involving farmers in water management, based on the participatory irrigation management (PIM) approach, gives them a voice in decision-making with regard to water distribution, system operations and maintenance which is vital for the sustainability<sup>4</sup> of the resource (Xie, 2007).

Generally, the point of departure for the analyses of the role of a developmental state in this study depends on the review of the mainstream developmental states, which include stories of their successes and failures. These stories should serve as a learning curve for the latecomer countries and enable them to make informed decisions about their development pathways. There is little doubt that many of the Asian developmental states have been successful in achieving rapid economic development and overall socio-economic transformation. Therefore, their experiences are crucial for today's emerging developmental states – most of the good practices (common features) of these states are relevant to African countries. The proviso is that these experiences have to be interpreted in the light of the social, political, and economic contexts of a particular developmental state. However, it is possible to analyse the role of developmental state in the African context by taking cognisance of their common features. Figure 1.1 shows the overall governance of the developmental state, and adapts these to fit the current context.

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<sup>4</sup> Protection of the environment, restoring the natural systems we depend on, and ensuring the equal rights of future generations. The gradual emergence of consensus among countries supporting the UN's value-laden Sustainable Development Goals (SDGs) signifies a growing acceptance of the essentiality of values in economics and other fields of social life, especially the value of sustainability (Jacobs et al, 2017).





### ***1.8.1 Sources and methods of data collection***

The nature of the research problems/questions of this study required both quantitative and qualitative data from primary and secondary sources. This provided a comprehensive analysis of the research problem (Creswell & Plano Clark, 2011). The study encompassed a combination of textual analysis (a review of literature), structured questionnaire surveys, semi-structured key informant interviews, and focus group discussions (for the case study). Using contextual analysis, the study reflected on the successes and failures of the developmental state model and highlighted some crucial lessons for developing countries when considering the developmental state as an alternative model to tackle the vicious cycle of poverty.

Secondary sources of data were crucial to provide analytical, empirical, and comparative information for this study, as well as critical opinions. Some of the research questions that were addressed using mainly secondary sources of data are:

1. What is the mainstream conception of the developmental state in relation to institutions and institutionalisation, as articulated in the international literature on the developmental state?
2. What conception of the developmental state has been incorporated into the Ethiopian state's official development ideology, as reflected in both its official documents and the written perspectives of its key representatives? Is Ethiopia's conception of the developmental state adequate for the context in the light of the international and African literature on the subject?

Likewise, part of specific objectives addressed using secondary sources of data are:

1. To provide a detailed review of the theory of institutions and developmental state paradigm
2. To provide a detailed review of the role of the developmental states and institutions for achieving economic development in Africa; and
3. To assess the role of the emerging developmental state in economic development and building context-specific institutions in the context of Ethiopia

Hence, to address the first and second research questions and objectives, this study relied mainly on a detailed literature review, including various scientific publications (research papers, articles and Journals), books, reports of regional and international institutions, and policy document analyses to acquire relevant theoretical and empirical evidence. With regard to the international sources, data were obtained mainly from official documents published by international institutions such as the World Bank, the International Monetary Fund (IMF), the United Nations Development Programme (UNDP), and The United Nations Economic Commission for Africa (UNECA), and annual economic reports on Africa to understand analytical and empirical evidence. Likewise, to address the third research question and objective (the case of the Ethiopian developmental state), information was derived mainly from published and unpublished documents of the ruling party and the consecutive mid-term, five-year development plans. The ADLI (a base for all sectoral development policies) was used as a policy document, because it outlines the policy orientation of the country and gives a clear indication of the goals of the Ethiopian developmental state model. In addition, official documents issued by the Ministry of Finance and Economic Development



(MoFED) and other ministries and agencies of the Federal Government of Ethiopia, and the development plans and strategies, and annual reports of specific sectors were other sources of information. For the statistical data, the main sources were the official statistical reports issued by the Central Statistical Agency (CSA) of Ethiopia. At local (district and village) level, data were obtained from official reports of local government and various organisations. Other important sources of domestic information were online newspapers and research outputs written by scholars.

Primary sources were also crucial for the case study of the Raya Valley groundwater irrigation and information was gathered from the community on their perceptions of how the irrigation project was progressing. These primary sources included beneficiary farm households, their associations, village leaders and extension workers, as well as district/*woreda* leaders in the case study area. Different techniques can be used to collect primary data and the choice of a technique depends on the purpose of the study, the available resources, and the skills of the researcher, the agro-ecology, as well as socio-economic and demographic characteristics of the studied population (target population or sampling units). Accordingly, the primary data were collected using focus group discussions and key informant interviews based on a semi-structured questionnaire, as well as a survey questionnaire – this is not only valid but it is also the most common type of primary data collection instrument used in the social sciences. Moreover, useful information was also obtained from many informal conversations with the local people, who provided valuable opinions on the nature and practice of the developmental state at the grassroots level in Ethiopia, as well as personal observation in the field.

Data collected from the beneficiary farm households using the questionnaire and other instruments are crucial in the case study to address the research question. These are how Ethiopia's conception of the developmental state—as articulated in its official development ideology and the perspectives of its key representatives – influenced and shaped the way in which the state has assembled the institutional arrangements and practices in the Raya Valley groundwater irrigation project? Is there evidence of a direct relationship between Ethiopia's conception of the developmental state and the actual institutional arrangements and practices in the Raya Valley project? What are the successes and challenges of the Raya Valley project? The specific objective is to investigate the role of a developmental state and the existing institutional arrangements for the sustainable utilisation and governance of groundwater irrigation in the Raya Valley.

The questionnaire consisted of three major parts and many of the questions aimed at quantifying various issues of interest in the case study. The first part comprised questions related to the socio-economic characteristics of the respondents, for instance, sex, age, marital status, level of education, family size, land arrangement, and so on. In the second part, the respondents were asked questions related to services such as access to training, credit and modern agricultural inputs. The third part assessed access to groundwater irrigation and its benefits, such as: How many hectares of land they have cultivated. How many crops have been grown? How much of each crop has been harvested in the different seasons? What are the issues around

groundwater irrigation management, accessibility of institutions and the market, and the challenges encountered?

### ***1.8.2 Sample selection procedures/techniques***

Sampling is the process of selecting elements (i.e. a portion of the population) from the total population of the study, which saves the researcher's time, cost and effort. This is a recognised method of collecting data, apart from the saving time and money (Sapsford & Supp, 2006). There are two sampling techniques – probability (random) and non-probability (non-random) sampling. The former is used mostly for quantitative research, while the latter is used for qualitative research. Samples selected for quantitative research are usually large, random and representative of the population (Creswell, 2014). Therefore, for this study, the random (i.e. systematic random) sampling technique was applied to select the respondents from the larger population. Systemic random sampling is one of the common sampling approaches for selecting samples from the population; i.e. in the systemic random sampling, every element in the population has an equal chance (opportunity) of being selected.

The case study of the Raya Valley groundwater irrigation project was purposely selected because it offers access to modern groundwater irrigation systems that were developed through deliberate public investment. Because of the area's relatively good groundwater potential, the government devoted substantial public funding into the development of the water resource for irrigation purposes. The sample of respondents was selected from villages that have access to groundwater irrigation in the project area. To make the sample representative, five *tabias* (villages) were deliberately selected from the project area, based on their distance from district towns, to minimise the cost to the researcher. However, the deliberate selection of studied villages did not affect the representation of beneficiary farm households in the study because there are no significant variations in agro-ecological and socio-economic phenomena across the Raya Valley project area; i.e. there is homogeneity in all aspects across the project area. After selecting the sample villages, using systemic random sampling techniques, 226 sample respondents (households) were selected from the project area via a complete list of beneficiary farm households (see Table 1.1). Due to the homogeneity characteristics of the project area (i.e. agro-ecology, socio-economic factors, access to markets/roads, irrigation system/infrastructure, and so on) the selection of *tabias* and sample respondents was not that much complex.

**Table 1.1: Sample respondents selected from each village**

| District/woreda | Study village/tabia | Sample irrigation schemes | Sample selected |
|-----------------|---------------------|---------------------------|-----------------|
| Raya Alamata    | Gerjele             | 2                         | 44              |
|                 | Harle               | 1                         | 22              |
|                 | Selam Bikalsi       | 2                         | 52              |
| Raya Azebo      | Wargba              | 3                         | 71              |
|                 | Kara Adi-shawo      | 2                         | 37              |
| Total           |                     | 10                        | 226             |

To triangulate<sup>5</sup> the information gathered from the survey questionnaires, information was also collected through focus group discussions with leaders of the water-users' associations (WUAs) (i.e. beneficiary representatives), and key informant interviews with people that were well informed about the project implementation to obtain the necessary information – the participants were purposely selected. Focus group discussion is essential to understand the issues related to the case study in the studied population. Information gathered from focus group discussions enables the researcher to understand the selected issues from the participants' point of view and provides a wealth of qualitative information. Likewise, key informant interviews provide vital information on individual perspectives and experiences related to the study. Experts from the offices of District Agriculture and Rural Development, Water Resource and Farmers' Cooperative Agency were some of the key informants interviewed to obtain information related to the implementation of the irrigation project. A few academicians from various disciplines at Mekelle University provided information on what is going on with regard to the official developmental state model. The difference between a focus group discussion and key informant interviews is that the former is undertaken with a group and the latter with an individual.

In general, all participants in the study were respected concerning their right to privacy and no data/information was collected without their consent. The researcher informed the participants about the scope, purpose and nature of the study, and obtained their permission. This ensured the voluntary participation of the research subjects before the commencement of the questionnaire interviews and focus group discussions. Using different instruments during fieldwork in both formal and informal discussions with individuals who are part of the society is crucial to supplement the secondary data compiled from different sources. This study is 'interdisciplinary' in nature, (i.e. it incorporates institutional economics, the developmental state and development economics, etc.). In addition to using these secondary and primary sources of data, the researcher also consulted with experts from these respective subject areas to understand and discuss issues from different perspectives.

<sup>5</sup> Triangulation is used in the social sciences to describe research strategies that use different methods to answer the same question or, alternatively, to describe the collection of data from different strategies in order to improve the validity of the results. Data triangulation refers to the gathering of data from a variety of sources (Tashakorri & Teddlie, 2003).

### ***1.8.3 Methods of data analysis and interpretation***

The purpose of social research is to understand human behaviour, perceptions and experiences by means of qualitative and quantitative methods. An analysis of the broader context of this study was dependent on primary and secondary sources of data. This aspect of the analysis provided the basis for the theoretical analysis and linked the outcomes with broader discussions of the developmental state and institutions. Therefore, the analysis and interpretation of the data depended on the information provided by informants from the case study, as well as documents (published and unpublished) used as secondary sources of information. These were analysed and interpreted using both quantitative and qualitative approaches.

A quantitative method of analysis focuses on counting and measuring events, and performing a numerical analysis (quantification) of information. The results are typically presented using statistics, tables and graphs (Onwuegbuzie & Teddlie, 2003; Marczyk et al., 2005; Creswell & Plano Clark, 2011; Kumar, 2011). The outcome of the quantitative analysis of the data (from both primary and secondary sources) is numerical. This implies that the purpose of the quantitative survey is to test statistically the effect of the existing policy intervention in the form of public investment (Marczyk et al., 2005; Khandker et al., 2010). Whereas, the qualitative method are appropriate to gain an in-depth understanding about the contexts and perceptions of the respondents derived from qualitative information. By definition, it is exploratory, based on in-depth investigation, and it explores information from both groups and individuals participating in focus group discussions, and key informant interviews, as well as observations and document analysis to generate theories (Onwuegbuzie & Teddlie, 2003; Marczyk et al., 2005; Creswell & Plano Clark, 2011; Kumar, 2011). Qualitative methods explore the perceptions (from different perspectives) of the participants who provide information on behalf of the studied population, and involve a continual relationship between theory and the actual outcome of the study. This generally emphasises the exploration of new phenomena to understand complex realities, and focuses on the provision of in-depth information (Marczyk et al., 2005; Khandker et al., 2010).

Mixed methods of data analysis, on the other hand, involve collecting both quantitative and qualitative data and integrating both methods of data analysis (see Table 1.2). The core purpose of mixed methods of data analysis is that the combination of qualitative and quantitative approaches provides a more complete understanding of a research problem/or the contexts of the study than either of the single approaches. Mixed methods of analysis lie in the middle of this continuum because they incorporate elements of both qualitative and quantitative approaches (Creswell et al, 2003; Onwuegbuzie & Teddlie, 2003; Tashakorri & Teddlie, 2003; Creswell & Plano Clark, 2011; Creswell, 2014). In the mixed methods approach there are two approaches to data collection. The first is relatively simple, where qualitative and quantitative data are collected concurrently (at the same time), while the second is a complex sequential approach (where the data sets are collected one after the other) (Creswell et al., 2003; Creswell & Plano Clark, 2011). For this study, the first approach was applied; i.e. both the quantitative and qualitative data were collected at the same time.

From a methodological perspective, this study utilised mixed methods of data analysis; one of the advantages of this is that it enables the researcher to make inferences across both the quantitative and qualitative data.

**Table 1.2: Quantitative, mixed and qualitative methods**

| Quantitative methods                                             | Mixed methods                                       | Qualitative methods                                            |
|------------------------------------------------------------------|-----------------------------------------------------|----------------------------------------------------------------|
| Pre-determined                                                   | Both predetermined & emerging methods               | Emerging methods                                               |
| Instrument-based questions<br>(closed-ended questions)           | Both open- and closed-ended questions               | Open-ended questions                                           |
| Performance data, attitude data, observational data, census data | Multiple forms of data drawing on all possibilities | Interview, observation, document review, and audio-visual data |
| Statistical analysis                                             | Statistical and text analysis                       | Text and image analysis                                        |
| Statistical interpretation                                       | Across databases interpretation                     | Themes, patterns interpretation                                |

Source: Creswell (2014)

The combination of qualitative and quantitative methods, therefore, facilitates an in-depth understanding of a phenomenon from different perspectives and is useful to obtain a comprehensive view of the effect (positive or negative) of a specific public-development programme. Moreover, such methods offer a greater diversity of viewpoints and allow for the inclusion of a variety of data sources, which broadens the extent and scope of the questions answered (Marczyk et al., 2005; Creswell et al., 2003; Khandker et al., 2010). These methods are considered a vehicle for improving the quality of the inferences that are drawn from both the qualitative and quantitative data (Creswell & Plano Clark, 2011). The use of a mixed method approach assists in the triangulation of information from different sources, and leads to multiple inferences and confirmations. Different methods yield similar results and strengthen inferences, while a combination of methods also provide a more comprehensive set of findings (Onwuegbuzie & Teddlie, 2003).

With regard to the role of developmental state in an institutional perspective, a case study analysis is used for a few SSA countries, including Ethiopia, based on the theoretical and empirical evidence from the existing literature on the developmental states and review of different documents. The general assumption about the developmental state paradigm is that the relationship between the developmental role of the state and the substantial economic outcomes of that country is positive. The analysis is done through deductive reasoning with the starting point being the classical theory of the developmental states (i.e. the authoritarian East Asian developmental states) moving towards the contemporary, twenty-first centuries, and emerging developmental states. Consequently, a profound analysis of the developmental states of East Asia, in the light of the emerging developmental state on the African continent, is developed by making qualitative comparisons, which could help to draw an overall picture about the possibility of the developmental state as an alternative development model in the African context. To do this, one must analyse the extent to which nations satisfy the necessary common (but not sufficient) features of the developmental state. These necessary features of the developmental state are not static, but dynamic, and are adapted contextually. Each

state has its own distinctive features in terms of historical, cultural, political and socio-economic preconditions. However, the global context keeps changing over time and contextual factors are consequently crucial and necessary considerations.

Therefore, mixed methods of data analyses are used in this study to understand the robustness of the role of the developmental state and its institutions in achieving economic development in the African context, and particularly in Ethiopia. This method helps us to understand the role of the developmental state in nurturing context-specific and far-reaching institutions to facilitate the general development process, and particularly sustainable resource utilisation and management. In addition, it helps to us to understand state–private sector, as well as state–society relationships, and the status of the practices of groundwater irrigation management for the sustainability of the ‘common pool’ resources in the study area, based on the state–society ties. The analysis is supported by numerical evidence (using the quantitative method) to understand the effect of public-policy intervention by the developmental state from both primary and secondary data sources. One important point to note here is that the data collected from a variety of sources have been systematically analysed using mixed methods, and these are illustrated in the forms of frequency scores, means, percentages, tables, charts, diagrams, without the data being distorted.

## **1.9 Scope and significance of the study**

The scope of this study delimited on the assessment and analysis of the role of the developmental state for economic development in an institutional economic perspective, based on the mainstream conception of the developmental state literature and different institutional theories. The literature reviewed in this study was confined to the mainstream conception of the developmental state, as well as on the conceptions that have been developed in the African literature on the subject. Therefore, the mainstream conception of the developmental state ideology was discussed, based on the experiences of the East and Southeast Asian developmental states. Following this review of the main conception of the developmental state, this study tried to examines the role of the officially claimed Ethiopian developmental state. Moreover, it examines the role of the developmental state and the existing institutional arrangements from the perspective of sustainable utilisation and governance of groundwater irrigation at grassroots level via a case study of the Raya Valley groundwater irrigation project.

Having this delimitation, the significance of this study lies in contributing to the understanding of the role of developmental states, from an institutional perspective, by examining both theoretical and empirical evidences of developmental states. Hopefully, this will be served as an additional resource in the literature on the developmental state in the African perspective. This study also tried to give recommendations how African nations should recognise a developmental state paradigm by designing their own appropriate institutions that serve as the engine of economic growth/development. This recommendation could be considered as something akin to balancing the political and economic directions in an attempt to achieve the development projects of the developmental state in Africa. One of the possible contributions of this study is

to show how the developmental state paradigm could have been adapted in the first place by taking the specific contexts of individual countries into consideration, which is essential to strengthen their national cooperation with market and non-market actors, i.e. with all stakeholders in the economy. Furthermore, it tried to show how the developmental state can build co-ownership of public resources (in this case, the groundwater irrigation project) developed by public investment for the sustainable and efficient utilisation of resources. The Raya Valley groundwater irrigation project shows how the Ethiopian developmental state built context-specific institutions to use the water resource in a sustainable manner for the betterment of the farm households by devoting the required public (financial and human) resources. Finally, this study tried to offer additional valuable inputs that could be used by researchers, academicians and governmental organisations in their efforts to understand the role of the developmental state in the African context and these inputs possible help to fill the existing gap in the literature related to the African context.

### **1.10 Outline of chapters**

Chapter 1 introduces the study, providing some background and an overview of the Ethiopian economy; it also discusses the rationale for the study, the problem of statement and the objectives, as well as the conceptual framework and methodology. Chapter 2 reviews the literature and focuses on related the mainstream conception and features of the developmental state, theories of institutional economics, the need for and the rise of the developmental state model in Africa – a continent for the dynamic economic transformation, as well as the economies of irrigation development and practices. Chapter 3 provides an overview of post-independence African economies, which is crucial to see the overall picture of the African economic situation under different conditions since independence. Chapter 4 addresses the role of the emerging developmental state model in the case of Ethiopia. This chapter discusses how the conception of the developmental state has been incorporated into the Ethiopian state's official development ideology, as reflected in both its official documents and the written perspectives of its key representatives. Chapter 5 discusses the issue of the Raya Valley groundwater irrigation project (the case study), which is considered by the Ethiopian state as one of the pro-poor and pro-growth public investments of in the study area. It addresses how Ethiopia's developmental state, as articulated in its official development ideology, shaped the way in which it has assembled the institutional arrangements and governance practices in this irrigation project. Chapter 6 concludes the study and provides some recommendations. It presents the main findings of the study and points out what needs to be considered when countries build a developmental state model.



## **CHAPTER TWO: REVIEW OF THE LITERATURE ON THE DEVELOPMENTAL STATE, INSTITUTIONS AND IRRIGATION**

### **2.1 Introduction**

The literature review focuses on the mainstream conceptions of the developmental state, the theories of institutions and the need for and the rise of the developmental state in Africa – a continent, as well as on the economics of groundwater irrigation development and practice. This body of literature has made a significant contribution to the whole analysis of the study. Hence, the research question addressed in this chapter is what is the mainstream conception of the developmental state in relation to institutions and institutionalisation, as articulated in the international literature on the developmental state? Likewise, the specific objective is to provide a detailed review of the theory of institutions and the developmental state paradigm. Following the introduction, the first section contains the theory/concept and features of the developmental state model, the spread of the developmental state and some empirical evidences from these states in the East Asian countries. These demonstrated based on the classic and contemporary literatures on the topic, to understand the existing theory of the developmental state. The second section of this chapter covers the theories of institutions, such as the theory of the ‘old institutional economics’ (OIE), the ‘new institutional economics’ (NIE) and the ‘institutional political economy’ (IPE) schools of thought. Discussing each of these theories helps one to conceptualise the role of institutions. In addition, it provides a clearer understanding of the relationships and the differences between these contemporary institutional theories, especially in relation to real-world practice. Following this, the third section addresses the need for and the rise of the developmental state model in Africa – a continent for the dynamic economic transformation. The last section discusses the evolution/practice of groundwater irrigation, the economics of groundwater irrigation, and the management of the groundwater irrigation infrastructure/resource for sustainability.

### **2.2 The concept, features and spread of the developmental state**

#### ***2.2.1 The concept of the developmental state***

Chalmers Johnson (1982) first described the concept of the ‘developmental state’ in his book, *Ministry of International Trade and Industry (MITI) and the Japanese Miracle*. He used the concept of ‘developmental state’ to explain Japan’s rapid and successful economic development in the post-Second World War era. Johnson proposed the term ‘developmental state’ as an alternative development ideology to the existing (neoliberal) development ideology. This is one of a crucial step-forward in the argument of the current political economy that dominated by Western ideology (given varieties of capitalism) and which has neglected the role of the state in the economy. Johnson’s main thesis is that the origin of Japan’s developmental state is understood by examining specific events that shaped the country’s history. For instance, Japan’s struggle for the evolution of a developmental state model was closely tied to its efforts to cope with an international order dominated by Western developed countries, and its motivation behind



building the developmental state for was depend on its condition as a latecomer within East Asian revolutionary nationalism (Johnson, 1982; 1999).

To describe the developmental state, Johnson contrasts Japan's plan-rationale system – 'conjoining private ownership with state guidance' – with a binary distinction between the market-rationale system of capitalism in the United States and the completely state-dominated (command or central-planning) system of the Soviet Union. By positioning the idea of the developmental state between a liberal open-economy model and a centrally planned model, Johnson suggests that it is neither capitalist nor socialist in nature. Based on this distinction, he advanced three main arguments about the developmental state. (1) Markets do not exist in isolation but are a creation of the state and politics. (2) A developmental state comes first before development priorities are put in place and (3) the most crucial element of the developmental state is not its economic policy but its ability to mobilise the nation around economic development within a capitalist system (Johnson, 1982). Subsequent to Johnson's seminal work, numerous other scholars (cf. Haggard, 1989; Onis, 1991; Evans, 1995; Leftwich, 1995; 2005b; 2008; Johnson, 1999; Chang, 1999; Bagchi, 2000; Weiss, 2000; Mkandawire, 2001; Kang, 2002; Chibber, 2002; 2004; Khan, 2004; Kohli, 2004; Fritz & Menocal, 2006; 2007; UNECA, 2011) have expounded the concept of a developmental state. This rapidly expanding contemporary literature is concerned with a much broader agenda of the developmental state than simply state-driven industrialisation or capital accumulation.

During the 1980s and 1990s attempts to explain the economic miracles of Japan and the four 'Asian Tigers' helped to generate new interpretations of this emerging phenomenon and gave birth to a new conception of the state – the developmental state. By the early 1990s, even the loyal advocates of free markets and minimal states, such as the World Bank, had admitted the significant role of the state in creating high economic growth rates and increasing the living standards in these East Asian countries (World Bank, 1993; Howel, 2006). More importantly, the outcomes from the successful East Asian developmental states generated significant contributions to economic development, equity in income distribution and poverty reduction. Due to these positive outcomes, donor communities and international institutions began to rethink the role of the state in economic transformation (World Bank, 1997; Menocal, 2004). There is a growing awareness among scholars and practitioners about the importance of the state's developmental orientation and effectiveness to explain the success or failure of countries to achieve their development goals (Fritz & Menocal, 2007).

In the plan-rationale state, the government will give greatest precedence to industrial policy, that is, to a concern with the structure of domestic industry and with promoting the structure that enhances the nation's international competitiveness. The very existence of an industrial policy implies a strategic, or goal oriented, approach to the economy (Johnson, 1982:19). Even though industrial policy is crucial in the developmental state, it cannot replace the market as all state actions intervening in the economy must be market-conforming (Johnson, 1982:317).

The characteristic of Taiwan and South Korea is also the same as that of Japan where the state has prioritised economic development for over three decades. This shared characteristic is also possible to generalise for the rest of the East Asian developmental states based on economic development as the first priority of the states (Johnson, 1982:305).

However, for many analysts the developmental state is the product of a particular period. In Japan, this was between 1925 and 1975 and for the rest of East Asia, between the 1960s and 1990s (Mkandawire, 2001). By the early 1990s, conditions were changing due to a shift in the global political economy. The end of the Cold War and the onset of globalisation tended to transform powerful, authoritarian bureaucracies of the East Asian states (Stubbs, 2009). This indicates that the developmental state ideology does not last forever in any country; (developmental state is a means it not an end) and, indeed, success in promoting development leads to this type of state becoming its own ‘gravedigger’. That is, instead of being static, the developmental state is a transitional form of the modern state (Evans, 1995). Accordingly, the developmental state becomes less attractive as the economy matures (i.e. when it reaches the frontiers of technology and knowledge) and coordination problems become less acute. For instance, at the end of the Cold War, the United States started to put considerable pressure on its allies to move in the direction of democratisation and to have greater respect for individual human rights (i.e. a transition towards a more liberal economic system).

The United States started to put considerable pressure on its allies to move down the road to democratization and greater respect for individual human rights. The US government commenced a campaign to liberalize the economies of East Asia. Using its own levers of persuasion as well as its institutional muscle within the IMF, the World Bank and the OECD, the United States began to put considerable pressure on the governments of Japan, South Korea, Taiwan and Thailand to liberalize all facets of their economy, especially the financial sectors. In good part, this meant that Washington actively promoted deregulation and privatization within the developmental states of East Asia<sup>6</sup> (Stubbs, 2009:10).

Moreover, new ideas about the best economic policies to pursue were brought into regional governments by technocrats trained overseas, especially economists who were educated in US, or British universities. Overall, then, the collapse of the Cold War and the onset of globalization tended to transform parts of the once powerful bureaucracies of East Asia (Stubbs, 2009:11).

However, even after the 1990s, scholars have continued to investigate the developmental state from various angles, following the popularity of the theory of institutions. Furthermore, the ideas and institutions that were associated with the emergence of the developmental state became highly entrenched because they were associated with the transformation of the economy from poverty and social dislocation. Institutionalists argue that the market is not the only or dominant institution in the economy. Many others play an integral part in the socio-economic life of the real world (Chang, 1994; 2002; 2003a). The developmental state acknowledged as a new alternative development ideology that contributed to the success of several countries in East Asia, such as Japan, South Korea and Taiwan, to Southeast Asia such as Singapore, Hong Kong, Thailand, Malaysia, Indonesia and, more recently, China and Mauritius, and Botswana in sub-Saharan Africa. Chang explains the need for the reconstruction of the developmental state in political, ideological and institutional terms:

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<sup>6</sup> For instance, the first civilian presidential election was held in South Korea in 1987 and Thailand experienced much the same practice. The end of the Cold War ended the massive military and economic aid that had helped to promote strong states in the East Asian region. The shift from a Cold War environment to a globalised environment changed the way capital entered the developmental state. Declining amounts of aid were replaced by a flood of Foreign Direct Investment as multinational corporations sought to restructure their export manufacturing to take advantage of the increasingly highly productive and low-cost production platforms in the region (cf. Stubbs, 2009).

A developmental state, which can create and regulate the economic and political relationships that can support sustained industrialization and takes the goals of long-term growth and structural change seriously. And 'politically' manages the economy to ease the conflicts inevitable during the process of such change (but with a firm eye on the long-term goals) and engages in institutional adaptation and innovation to achieve those goals (Chang, 1999:192).

Here Chang provides a more institutional perspective, emphasising the role of the developmental state in shaping the development process by using its institutions. From this perspective, the developmental state could be seen as an active manager of economic development, promoting fair distribution of resource among all economic actors. The developmental state's functions go far beyond the conventional sense of merely correcting market failures. Rather, the developmental state further coordinates substantive changes and is involved in providing vision-driven, enterprising, empowered, performance-oriented government, promoting active citizen participation, building necessary institutions and managing inevitable conflicts during its economic development by reducing inequality and providing basic public services (Chang, 1994; 1999; Weiss, 2000).

Johnson describes the developmental state as one that determines the direction and pace of economic development by directly intervening in the development process rather than relying on the uncoordinated influence of market forces to allocate economic resources. This indicates that the state must guarantee the policy tools that give additional bureaucratic authority to state interventions in the economy without undermining market principles (Johnson, 1982). Adrian Leftwich (1995) also introduced a theory of the developmental state that was centrally premised on political considerations, or on the primacy of politics. Leftwich emphasises 'politics as the dominant variable that determines the concept of the developmental state as well as the developmental success or failure in all human societies' (Meyns & Musamba, 2010). This means that politics is a prime instrument to accelerate development in a developmental state, although it is not necessarily unique to the developmental state. As Leftwich further notes, in latecomer developing countries, development turns crucially on the primary role of politics in shaping the character and capacity of the state. Thus, suitable politics, in the sense of context, dynamics and purpose, have been central in shaping the structures of developmental states, their development aims and their impressive performance (Leftwich, 1995; 2005b; 2008). Developmental states across the developing world are sharpening their interventionist instruments to target all the holy cows of the neoliberal era. Even though G-8 and G-20 leaders continue to advocate the virtues of free markets at every international meeting, regulators and businesses are quietly introducing a wide range of protectionist measure. Thus, 'getting the prices wrong' from a pure market perspective may well be the hallmark of the new generations of the developmental state (Swilling & Annecke, 2012). Furthermore:

The recent global economic crisis (stemming from market failure), the rise of China, East Asia and some Latin American countries as newly industrialized nations, and Africa's solid decade-long economic performance have rekindled discussion on the role and nature of the state in the development process (UNECA, 2011: 95). Meaning that, the crash of October 2008 and the (partial) demise of neoliberalism that this represents has effectively cleared the way for some of the more progressive developmental states that are keen to promote a more inclusive form of capitalism than the kind of championed by neoliberalism. Some

socialist alternatives (whatever this may mean in practice) might also emerge, but probably on the margins of the global economy. China's leaders will feel that their state-managed capitalist model has been vindicated (Swilling & Annecke, 2012:83).

This argument indicates that the developmental state becomes an alternative development ideology for developing countries to build inclusive forms of capitalism by integrating the roles of the market and the state – but only if countries nurture this ideology based on their own context, given well-functioning institutions.

To conclude, the developmental state, as various authors have described it, has become one of the alternative development models to accelerate the development process of latecomer countries. This is because the market-dominated (minimalist state) or neoliberal development approach was tested for many years and it failed in Asia, Latin America and Africa. It is obvious that a developmental state is one that promotes macroeconomic stability and establishes well-functioning institutions that provide law and order, effective administration and appropriate infrastructure investment, and boosts human capital development by investing in social sectors such as education and health (Mkandawire, 2001; 2010). Furthermore, a developmental state is described as one that is able to deploy the requisite institutional architecture and mobilise society toward the realisation of its development projects (Edigheji, 2010). Therefore, after the adoption of a developmental state, countries can design effective instruments to promote the development process. Some of these include the establishment of well-functioning formal institutions, the integration of formal and informal networks of collaboration among citizens and officials, and the utilisation of new opportunities for profitable trade and production activities (Bagchi, 2000).

### ***2.2.2 The characteristics of the developmental state***

Developmental states have different evolutionary paths, contexts and trajectories, which result in a wide variety of the specifics of their contexts, depending on which case is considered. Therefore, any attempt to build common features of developmental states cannot be extended to mean that there is only one way of understanding and describing developmental states. However, this section provides some of the distinctive features of developmental states, which became apparent in the successful developmental states in the last three to four decades of the twentieth century. These features are not a 'blue-print' from any one country; they are common pillars that a state could adopt and adapt to its own context. Although these features are considered necessary, they are not sufficient to build successful developmental states in the latecomer developing countries. Authors define the concept of the 'developmental state' in different ways and define the common features from divergent approaches. Accordingly, some of these features are discussed, starting with the classic work of Chalmers Johnson. Based on Japan's successful post-Second World War experience, Johnson (1982:314–20) described four of these essential features as follows:

1. 'The existence of a small, inexpensive, but elite state bureaucracy staffed by the best managerial talent available in the system. The duties of this bureaucracy would be, first, to identify and choose

the industries to be developed (industrial structure policy); second, to identify and choose the best means of rapidly developing the chosen industries (industrial rationalization policy); and third, to supervise competition in the designated strategic sectors in order to guarantee their economic health and effectiveness.’

2. ‘A political system in which the bureaucracy is given sufficient scope to take initiative and operate effectively.’ This indicates that strong cooperation between politicians and bureaucrats have been the foundation stone of the developmental state.
3. ‘The perfection of market-conforming methods of state intervention in the economy’: this approach is crucial to develop strong governmental financial institutions, use indicative plans to set goals and guidelines for the entire economy, create forums for the exchange of views, revise policies, obtain feedback and resolve differences. There is extensive reliance on public corporations; the creation and use of an ‘investment budget’; anti-trust policy oriented to developmental and international competitive goals rather than strictly to the maintenance of domestic competition; and government-sponsored research and development (R & D).
4. ‘A pilot organization, namely the Ministry of International Trade and Industry (MITI)’ in Japan, the Economic Planning Board (EPB) in South Korea, the Economic Planning Agency (EPA) in Taiwan, the Economic Development Board (EDB) in Singapore and the Economic Planning Unit (EPU) in Malaysia. The pilot agency emerged as the principal institutions responsible for policy formulation and implementation, as well as resource mobilisation and utilisation. A small but powerful pilot agency can provide important strategic guidance in the selection of key development projects to be encouraged and in the provision of a stable/predictable environment for private sector to undertake risky and long-term investment projects.

Following the above description of Johnson’s seminal work, Adrian Leftwich (1994:378–80; 1995:405–6) synthesises the following six major features of the developmental state model in more detail than those identified by Johnson. These significant components either are detailed versions of the four elements developed by Johnson (1982) or are described in more depth. These six features are:

- ‘Determined developmental elite committed to the modernisation project’;
- ‘Relative autonomy from major capitalist economic interests who are always keen to capture the state’;
- ‘Powerful, competent, and insulated economic bureaucracy that enjoys the highest possible political support rather operates without too much political interference’;
- ‘Weak and subordinated civil society which means there are no rival centres of alternative policy formation and consultation with them’;
- ‘Effective management of non-state economic interests via the formal structured compacts, incentives, and penalties for the sake of the common or national interest’;
- ‘Repression, legitimacy, and performance that helps to consolidate credibility of the state through having accessible and responsive institutions in the economy.’

The first three of these features, namely, the developmental elite committed to economic development, autonomy from specific interest groups or factions and a recognised ability of the bureaucracy to implement a growth policy are, in effect, important initial conditions and can be thought of as a micro-foundation of developmental states. Besides these features developed by Johnson and Leftwich, there are some additional key features of developmental states. These are: (1) ‘Possession of embeddedness’ with the society, private sectors, civil society organisations and other economic agents (Evans, 1995). (2) ‘Selectivity’ and ‘prioritisation’ because of resource constraints are common problem for every country that prevented countries from implementing all development projects at a time. To be successful, a country should select a set of strategic economic sectors and implement these, based on their priority in a specified period. The strategic sectors are considered as the backbone of the economy and the engine of all other economic sectors in the future (Evans, 1995; White, 1998). (3) ‘Production-oriented private sector’ via used instruments such as selected and strategic protectionism, industrial subsidies, and the creation of business coalitions among industrial capital, financial capital and state, and then at the end, these are either rewarded or punished, based on their performance standards and targets (Booth, 1999; Westphal, 2001; Wong, 2004).

### ***2.2.3 The spread of the developmental state ideology***

In practice, successful developmental states have helped to change the economic order of the world by allowing many developing countries to catch up with other advanced nations in the West by accelerating their role in the process of development and structural transformation. The developmental state first appeared in Japan in the late-1950s; Japan’s two close neighbours, namely, Taiwan and South Korea, soon followed in the 1960s (Johnson, 1982). The developmental state has proved its vitality and has adopted by various nations across Asia, especially in Southeast Asia. The recent successes of economies in Southeast Asia (such as Singapore, Hong Kong, Thailand, Malaysia and Indonesia) and China, following the successes of Japan, South Korea and Taiwan, provide convincing evidence that the international economic order has changed significantly because of the rise of developmental states. Some of these have become industrialised countries, while others have raised their standards of living considerably and narrowed the gap between themselves and developed economies, making Asia one of the most dynamic regions in the world today (IMF, 2011).

This successful development might be explained in several ways but the role of the state remains indispensable. The success of developmental states is based on the endeavours of selective and decisive economic sectors (Yeung, 2009; Wei et al., 2009). Although the concept of the developmental state paradigm emanated from Northeast Asia, variations of this ideology have been seen in different parts of the world. Why developmental states have appeared so often in the countries of Southeast Asia might be explained by their close proximity, their similarities in customs, cultures, social norms and political traditions, their geopolitical advantage at the time of the Cold War and strong regional integration. This suggests that the developmental state model has a wider application and relevance – even outside of its region of origin (Japan) – when the preconditions for it to emerge are available (Leftwich, 1995; 2008). The



virtue of this economic development model has been recognised elsewhere. For instance, Botswana and Mauritius in SSA and Brazil in Latin America have adopted similar developmental state models to the countries in Southeast Asia (Leftwich, 1995; 2008). In general, however, East Asia has been the main region to adopt this model and it has emerged frequently in many latecomer developing countries. However, the proponents of a neoliberal ideology and the process of globalisation, in particular have challenged this development model, since 1990 following the end of the Cold War.

The developmental state paradigm was also pursued in the import-substitution industrialisation policies of select Latin-American countries, in particular, the Brazilian developmental state. As elsewhere in Latin America, the developmental state of Brazil emerged haphazardly in response to economic crisis (Ashman et al., 2010; Schneider, 2015). The economic policy of import substitution regarded as the first step towards the formation of the Brazilian developmental state (Riczy, 2014). In the early stages, Brazil's developmental state was reasonably successful via the deepening its interventionism in the economy to mobilise resources for development. When the country experienced an 'economic miracle,' reaching average growth rates of 11% from late the 1960s up to the early 1970s, the developmental state appeared to be highly successful in aggregate economic terms. While the state was a major impulse for rapid growth of the Brazilian economy since the 1950s and transformed from agrarian into industrial economy, it proved unable to overcome the deep economic problems of the country in the 1980s and early 1990s (Weyland, 1998). In comparison with the top performing developmental states of East Asia, the Brazilian version of the developmental state did not promote a vast reorientation of the economy toward high tech and high value-added manufacturing (Schneider, 2015). This meant that state intervention was initially successful, but soon stumbled, thereby reducing the state's ability to guide development. This is because the instruments of state intervention became increasingly vulnerable to capture by societal groups and clientelist networks (Riczy, 2014).

However, the Brazilian developmental state shared some characteristics of cohesive-capitalist states<sup>7</sup> (though not as purely as in the case of the Korean developmental state) and provided a secure environment for capital formation, especially foreign capital, to accelerate the growth of the industrial sector (Kohli, 2004). Successive governments in Brazil – during the second half of the twentieth century – constructed the developmental state, which shared a few core elements of a developmental state including some Weberian agencies and effective institutional arrangements for monitoring and planning to accelerate the national development process (Schneider, 2015). Amongst the numerous political factors that enabled the Brazilian state to facilitate industrialisation was a growth-oriented political leadership; a narrow coalition of political and economic elites, competent and technocratic bureaucrats who were empowered to execute the will of the state (Kohli, 2004; Schneider, 2015). This developmental coalition intervened to promote rapid

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<sup>7</sup> Cohesive-capitalist developmental states are characterised by ideological and organizational characteristics that help to define goals/objectives in detail and therefore concentrate resources on a priority development projects. Cohesive-capitalist types of developmental states have managed to create powerful and effective states that have achieved such desirable goals as redistribution of wealth and rapid generation of new wealth (Kohli, 2004).



industrialization – including state enterprises, foreign capital, and indigenous entrepreneurs. Public expenditures rose sharply, reflecting the government's commitment to state-led development, funding expansion of the bureaucracy, development of infrastructure, and numerous (new) public enterprises. Given a policy framework designed to encourage import-substitution, the Brazilian developmental state lacked prior ideological commitment to controlling the 'commanding heights' of the economy, limited developmental capacities (the economic nationalism of the ruling elite remained shallow, which led to increasing dependence on foreign capital), and lacked a strong and dynamic indigenous capitalist sector associated with limited policy options. Brazilian indigenous capital, for instance, was concentrated in consumer industries (mainly non-durables goods), namely textiles, food, clothing, beverages, furniture, cement, glass, plastics, and paper. In contrast, the Korean state chose to build indigenous developmental capacities through strong state-private sector coalition/s (Kohli, 2004).

Since the developmental state is a transitional form of the modern state, countries that have already reached a certain level of economic development may no longer be developmental. However, developmental states are still relevant and necessary for the development and transformation of the economies of developing countries (Beeson, 2006). This means that a developmental state may die (outdate) in one country but a new one may start up somewhere else because this developmental model is critical to achieve reliable economic transformation in a particular context within a specific period. Although state-led development may result in an authoritarian environment (as the experiences of the East Asian developmental state have demonstrated), it is argued that the role of the state is vital to economic development, irrespective of the democracy in these states (Johnson, 1999; Beeson, 2006). As Leftwich emphasises, this is especially true in the developing world, given the priorities to achieve economic growth and improve the standards of living. After achieving the important goal of economic development, developmental states generally switch their attention to correcting the side effects of their rapid economic growth (Leftwich, 2005b; 2008).

Scholars have debated the role of the state in development and come up with many different ideas, many of which are still relevant, especially for the developing countries. Since the Japanese economic miracle, many developing countries have followed the Japanese model to transform their economies. Some of these have been successful (Evans, 1995), others less so (Haggard, 2004; Doner et al., 2005). This could be the result of these less successful countries failing to meet the key features of a developmental state, rather than a failure of the ideology itself. However, whatever the differences, the one common feature in all of the countries that have adopted this model is state's critical role in the transformation and development process (Leftwich, 1995; Bagchi, 2000; Haggard, 2004; Beeson, 2009), even though some of these may lack certain features of the classic developmental state (Kohli, 2004). Overall, successful developmental states have demonstrated how their political purposes and institutional structures have been developmentally driven, while their development objectives have been politically driven (Leftwich, 2008).

The critical question is what are the internal and external factors that have accounted for the recognised success of the East Asian developmental states? The internal factors include the existence of committed

political leadership; competent elite bureaucracy accompanied by far-sighted/context-appropriate institutions (i.e. the pilot agency); their Confucian tradition/social ideology, which contributes to bureaucratic strength and a positive attitude for development; relatively strong state–private sector relations based on ‘carrot’ and ‘stick’ instruments (Evans, 1995; Mkandawire, 2001; Kohli, 2004; Doner et al., 2005). With regard to the external factors, the global and regional environment provided a situation that permitted the emergence of successful developmental states (Mkandawire, 2001; Kohli, 2004; Kasahara, 2013). Most importantly, the United States was willing to flood the region with capital (i.e. financial resources and skilled human resources equipped with organisational and technical knowledge), mostly in the form of military and economic aid.<sup>8</sup> Preferential access provided by the United States to its domestic market for its Asian allies was critical for the ‘take-off’ of the region as were the large amounts of aid it provided. For instance:

During the Korean War, in 20-year period 1950-70, US aid to Japan averaged \$500 million a year. Aid to South Korea and Taiwan combined was even more massive. Huge amounts of military and economic aid to South Korea, and investment in infrastructure as well linked to the Cold War. From 1946-78, military and economic aid to South Korea amounted to \$13 billion (\$600 per capita) and to Taiwan \$5.6 billion (\$425 per capita) (Arrighi, 2002:30-31). The true dimensions of this munificence are revealed by the fact that the nearly \$6 billion in US economic aid to South Korea in 1946-78 compare with a total of \$6.89 billion for all of Africa and of \$ 14.8 billion for all of Latin America in the same period (Arrighi, 2002:31).

This opened its rapidly expanding domestic markets to manufactured goods from its East Asian allies. The United States was also able to pay the inflated prices for raw materials and industrial products that were needed to fight the wars in Korea and Vietnam (Stubbs, 2009; 2011). In these East Asian developmental states, government–business relations took place on at least two different levels:

On the most general level, East Asian governments managed to diffuse a sense that they were genuinely committed a collective project of national development. Despite political divisions and governmental missteps, this sense of a national project gained surprisingly widespread credence and constituted one of the most important ‘collective goods’ provided by the state. The essential complement to this broad ideological connection was a dense set of concrete interpersonal ties that enabled specific agencies and enterprises to construct joint projects at the sectoral level. The evolution of government–business ties in East Asia has been even more convoluted and counter intuitive than the evolution of the bureaucracy itself (Evans, 1998:74).

Government–business relations are important at the level of policy formulation and implementation, and effective relations depend on large volumes of high-quality information flowing between government and business corporations, as well as on a mutual confidence that predictions and commitments are credible (Onis, 1991; Evans, 1998). In the case of the East Asian developmental states, the relationship between government and business is based on an agreement on common goals, strategies and rules (‘carrot’ and ‘stick’), and on mutual complementarity to achieve developmental targets.

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<sup>8</sup> The military aid, prompted by the Korean War, the Vietnam War, the overarching Cold War, and later Japanese aid, as well as American and Japanese foreign direct investment (FDI), contributed to the substantial resources that were funnelled into East Asian economies (Stubbs, 2011). This indicates that high levels of FDI from the region, as well as outside the region, are another factor that contributed to the success of the East Asian developmental states.

These state–private sector relations have been continuous throughout the process of the structural transformation. ‘Committed political leadership’, ‘competent bureaucracy’, and well-functioning institutions are basic driving factors for successful state–private sector relations in the economies of these states. Where these relationships matter for the successful achievement of the national development projects, priority issues are formulated based on broad consensus. Obviously, the national development projects are different from country to country, depending on their development priorities. The relationship between government and the private sector depends on the national development projects and priority areas in that economy. For instance, in Japan and South Korea, the incentives and resources to guide private-sector activities were result-oriented, i.e. contingent on performance. The adopted performance standards usually linked to the objectives of the national projects and monitored at the firm level. State supports, which often-involved competition among private sectors, was limited to a specific period. To ensure the effective use of state support, private sectors were gradually subjected to the discipline of competition through international markets (UNCTAD, 2009). In other words, state support was given to the private sector for a limited period to achieve their specific targets.

Overall, there is no single organisational formula or pathway, which developing countries can use to replicate the experiences of the East Asian developmental states. A ‘one-size-fits-all’ approach does not work given the heterogeneous characteristics (diversity and exceptionality) of developing countries. East Asian bureaucracies and institutions were not gifted from their ancestors. They are hard-won structures built by means of a ‘trial and error’ or ‘learning-by-doing’ approach (Evans, 1998; Mkandawire, 2001). A country that wants to adopt the developmental state paradigm today should examine some of the good practices from these earlier, successful developmental states, and adapt these to its own particular political, economic, social and cultural environment. However, the big challenge for developing countries is finding the appropriate mix of market orientation and government intervention consistent with rapid and efficient structural transformation. It is equally important that the set of institutional and political arrangements should be compatible with the appropriate mix of state intervention and market orientation in the economy. The challenge in many developing countries is the shift from the state versus market to a market-friendly or capitalist development economy through the integration of the market and state (Leftwich, 2005a). To realise this, the market-state model needs to recognise the role of diverse and effective institutions in the economy. For instance, there was a difference in the institutional approach of the East-Asian and Latin-American developmental state/s, especially the Brazilian developmental state. With respect of Brazil, ‘embedded autonomy’ of the state bureaucracy from interest groups was limited, which led to the dysfunctionality of the state bureaucracy fed by poor performance, job-insecurity and dissatisfaction. This indicated that the Brazilian model differed quite substantially from the classic-type developmental state/s. In spite of being initially successful, the Brazilian development state was not sustainable – economically, financially, socially and politically (Ricz, 2014).

### ***2.2.4 Synthesis of the concept and features of the developmental state***

The diverse experiences of successful developmental states suggest that there is no ‘single blueprint’ for countries adopting this model. Each country must build its own model based on its existing internal and external contexts. The only binding trait of the relatively effective states was a firm political commitment to transform the country’s economy, rather than governing for the benefit of a few individuals or narrow interest groups (Evans, 1995). As a region, East Asia offered a political, economic and social model, and an enabling environment for the latecomer developing countries to catch up. Driving factors behind East Asian countries climbing the development ladder included a national desire for material well-being, demonstrations of excellence from neighbouring countries, and no imposition of terms and conditions or policy matrices by international organisations, as was the case in most of the SSA and Latin American countries. No other developing region in the Global South has formed such an organic and dynamic interdependence as East Asia did in the last few decades of the twentieth century (Ohno, 2003).

There are many factors with regard to committed political leadership, competent elite bureaucracy and well-crafted institutions, including market institutions, which are responsible for the speedy economic growth in the East Asian developmental states. These crucial factors include: efficient resource mobilisation and allocation; the provision of basic social services and infrastructure; export-oriented strategies; high levels of saving and investment through the assurance of appropriate credit and interest rate policies; the promotion of income equality and shared growth; productive state–business relationships; and selective interventions in strategic economic sectors (Fritz & Menocal, 2006; Evans, 2010). While this strong economic performance suggests a shared experience, there has been a growing awareness of the differences in the policies, strategies, and institutions used to accelerate and achieve rapid economic growth in these East Asian countries (Akyuz et al., 1998).

Explicitly or implicitly, the East Asian developmental states are undemocratic and authoritarian. Although, as a whole, they are effective in terms of structural transformation and poverty reduction, many have achieved this at the expense of democracy. Scholars such as Mkandawire, (2001; 2010), Evans (2010) and Edigheji (2010; 2012) have argued that democracy is not only possible in today’s developmental states but also necessary for them to accelerate their development process. Furthermore, in the current global environment it is unacceptable (unlike the Cold War period) to be an authoritarian regime. It has been argued that the persistence of authoritarian systems is a major hindrance, not only to political development but also to economic development in the current globalised world (Randall, 2007). Hence, adopting democratic principles (participatory and context-based ones, rather not these imported ones) is important to enhance the effectiveness of the role of the state on both the political and economic fronts. Thus, it is imperative for the current developmental states to have a national commitment to rapid development in an inclusive manner by allowing the participation of all stakeholders or economic actors.

Furthermore, the core project of the twentieth-century developmental state was to accelerate sustained growth/development through aggressive industrialisation, and the transition from an agricultural to a manufacturing-based economy. The developmental states consolidated an industrial base through technological capacity-building, institutional functionality and human-developmental capabilities. This provided the credibility and legitimacy they required to prioritise industrialisation and to limit excessive inequality through taxation and targeted interventions to promote sustained growth via aggressive industrialisation (Evans, 1995; Chang, 2002). The key to success was a massive investment in education and human capital, which was crucial to absorb the large investments in economic infrastructure to cope with high rates of urbanisation and to create an operating framework for heavy industry. In addition, the efficient utilisation of their natural resources and ecosystem services also played a key role in their economic transformation (Johnson, 1982; Evans, 1995).

However, this does not mean that all the developmental states are equally successful in all spheres, i.e. in political, economic, institutional, social and environmental aspects. Even positive transformations may be accompanied by negative consequences such as environmental damage or greater social tensions, which the state and society must address in a subsequent phase of the development process (Johnson, 1982; Evans, 1995). Therefore, efficient institutions are required to lead the development process by boosting investment in human capital development programmes in order to build capacity, promote economic diversification and develop massive labour-absorbing (labour-intensive) economic activities, and then transform into a manufacturing-based (high-tech) economy. Countries have varying development trajectories even when they adopt the same development model because they have different political, socio-economic, institutional and cultural contexts, and unequal access to infrastructure and resource endowments.

The basic features of the developmental states, as developed by Johnson, Leftwich, Evans and other scholars, have been discussed. However, there are some overlapping features, elaborated in the works of Chalmers Johnson and Adrian Leftwich. Therefore, it would be better to blend the features of the developmental state by either merging the overlapping ones or dropping those that encourage authoritarian behaviour of the state and weaken its relations with other stakeholders, such as civil society organisations. We would expect developmental states in the twenty-first century to build inclusive and participatory development, and create a broad cross-section of state–society relations from the grassroots level up, rather than the narrow state–elite (capitalist) relationships of the previous developmental states. Therefore, any features that encourage autocratic behaviour and narrow state–capitalist relations are considered undesirable typical features of the developmental state in the twenty-first century. Accordingly, the following features have been identified as ideal for a typical developmental state ideology:

- Committed, developmental-oriented, elite political leadership;
- A pilot agency for planning, monitoring and evaluating the development process;
- Broad-section of embedded state–society and relative autonomy of state bureaucracy;

- Competent, capable, independent and efficient state bureaucracy<sup>9</sup> or state institution;
- Selective, prioritised development projects based on the resources and demands of a nation;
- Promotion of a market-friendly development approach via a proper mix of state and market;
- Capacity to manage and encourage to create strong civil-society organisations;
- Encouragement of a productive-oriented private sector (effective ‘productive coalitions’);
- Development of performance-oriented state legitimacy and credibility by the citizens

The substantive developmental states in Asia possess many of these ideal typical features. For instance, the first-tier developmental states in Japan, South Korea, Taiwan, Singapore and Hong Kong are close to this archetypal developmental state model. Initially, most of them had at least the following features: a developmental-oriented elite leadership, a broad-section of embedded state-society, relative autonomy of state bureaucracy and the capacity and commitment to adopt market-friendly development. These essential features serve as a springboard to build the other features of the developmental state. As Leftwich (2008) noticed, ‘developmentally-oriented elites’ with ‘relative autonomy’ will generally attempt to build good quality bureaucracies, where one or more agencies undertake the planning and, to some extent, pilot tasks together. Elites need to embed themselves in the wider social and political environment to gain their support and cooperation.

A key feature of the developmental state is the relative but embedded autonomy of the core elite. The elite can formulate and implement policies relatively free from aggressive lobbying but embedded in a concrete set of social ties that binds the state to society and provides institutionalised channels for the continual negotiation of goals and policies (Evans, 1995). In contrast to this kind of ‘embeddedness’, the dense network of ties that connect the ‘state to industrial elites’ should be replaced by a broader, more ‘bottom up’ set of state–society ties to secure developmental success in the twenty-first century. This broad cross-section of state–society relations (i.e. inclusive embeddedness) ensures that the social basis and range of accountability of democratic politicians goes beyond a narrow band of elites to embrace broader sections of society<sup>10</sup> (Evans, 2011). In the twenty-first-century developmental state, this inclusive embeddedness might mean building a socio-political regime<sup>11</sup> that broadens developmental cooperation with networks of civil-

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<sup>9</sup> Capable public bureaucracies are more important and without competent and independent public bureaucracy, capability-expanding public services will not deliver, as it is difficult to implement rules and regulations, build well-functioning context specific institutions, and make them effective/successful. Independent means, appointments, and promotions are insulated from political-party control; but it does not mean insulation from dense contact with stakeholders, including the private sector and politicians (Evans, 2011).

<sup>10</sup> The old forms of embeddedness may impede rather than facilitate effective state action in today’s developing countries. Broad cross-section state–society relations are at the heart of the politics of the developmental state. Effective state–society linkages depend on the organisation of civil society and on the capacity of the state and the state can help facilitate the organisation of the ‘civil society’ (cf. Evans, 2011).

<sup>11</sup> A socio-political regime has four dimensions. First, how power relations are arranged and reproduced within the regime, that is, how political power is constituted, distributed and maintained by those who have power, especially the governing party and its allies within and outside government. Second, there is the underlying policy paradigm, which incorporates beliefs and defines the way policy problems are understood by the different policy actors who engage in



society formations and smaller entrepreneurs (the broader society) rather than focusing only on the needs of large corporates or narrow elite groups.

Moreover, if the state has autonomy, societies are more likely to support the concentration of state power to intervene in the economy and consolidate the process of embeddedness. Embeddedness and relative autonomy are complementary in the developmental state, i.e. having relative autonomy with a lack of embeddedness, or vice versa, makes it difficult to build a successful developmental state. Furthermore, performance should be both a target and a requirement of the developmental state to maintain legitimacy and credibility and achieve the long-term development projects. To achieve its targets, the state should encourage civil society organisations to become partners and support the production-oriented private sectors to contribute their part in the development process by using ‘carrot’ and ‘stick’ instruments.

### ***2.2.5 Empirical evidence of a developmental state***

The entire East Asian development experience, some Latin American countries like Brazil and SSA countries (such as Botswana and Mauritius) cannot be understood without acknowledging the role of the state in planning and coordinating the course of development and transformation (Johnson, 1982; Haggard, 2004; Kohli, 2004). These East Asian developmental states (Japan and the four Asian Tigers) adopted ‘export-oriented’ strategies instead of ‘import-substitution’ strategies in their development process, whereas, the Brazilian developmental state adopted ‘import-substituting-oriented strategies’<sup>12</sup>. Thus, starting from a subsistence agrarian basis, they could climb the industrial ladder quickly and, by the end of the 1980s, achieve convergence with respect to the structures and income levels of advanced industrial countries (Johnson, 1982; Kohli, 2004; Fritz & Menocal, 2006). Their economies were characterised by progressive demographic transitions, robust agricultural sectors and rapid export growth (Ikpe, 2008). As Page (1994: 617) explains, ‘The economic growth in these countries accompanied by high investment rates, exceeding 20% of GDP between the 1960s and 1990s, and unusually high rates of private investment were supported by rapid growth in domestic savings’. For instance:

The ratio of gross national saving to GDP, for instance, increased dramatically from around 3% to 35% in South Korea, from about 10% to 27% in Taiwan, and from 9% to 34% in Hong Kong, from about 15% to 49% in Singapore over the period of 1950/60 to 1990. There were also corresponding increases in the ratio of gross domestic investment to GDP over the same period, from 10% to 37% in South Korea, from 16% to 23% in Taiwan, from 9% to 28% in Hong Kong, and from 11% to 36% in Singapore (Akyuz et al., 1998:12).

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the everyday business of politics. Third, there is the way government and state institutions are organised and operated, which in turn, reflects the power relations and paradigm commitment. Fourth, there are the policies themselves that are debated and adopted by policy actors within a given socio-political regime (Swilling et al., 2015).

<sup>12</sup> Brazilian policy makers sought to promote import-substituting industries from mid-1950s by attracting foreign investors and building state enterprises. This import substitution was pursued within the framework of expansionist economic policies: both fiscal and monetary policies, including short-term external credit, were used to create resilience (Kohli, 2004).



In addition, a high and rising level of human capital (due to large public investment in social sectors) also tells a large part of the growth story of these countries. Another success story is their high productivity levels (for instance, in the agriculture sector using different irrigation technologies) which differentiated this region from the rest of the developing world between the 1960 and 1990 ‘heydays’ of economic growth (Booth, 1999). Furthermore, their export-oriented strategies provided them with the opportunity to increase their productivity as the benefits of large investments in development, particularly in human capital, contributed to higher levels of productivity (Lall, 1994; 1995). Given these arguments, the sound development policy and rapidly growing human capital (their investment in human capital started before implementation and following it) were the principal driving forces of their rapid growth. In addition, efficient institutions were considered the cornerstone for the achievement of their economic development (Mkandawire, 2001). Trade and foreign direct investment (FDI) linkages also appeared to be stronger between the first-tier NICs (Hong Kong, Taiwan, South Korea and Singapore) and the second-tier NICs (Malaysia, Thailand and Indonesia). Trade between these countries is growing much faster than their trade with other countries, and the first-tier NICs have become important markets for other producers in the region. There has been a mushrooming of FDI from the first-tier to the second-tier of NICs, as well as among the first-tier of NICs themselves (Akyuz et al., 1998; Kasahara, 2013).

The East Asian economies received the lion’s share of Japanese FDI to non-OECD member countries. For instance, the proportion of Japan’s FDI in the East Asian region’s total FDI grew from 10% in 1991 to 50% in 1997. It is important to note that a high proportion of Japanese FDI has been in the manufacturing sector in East Asia and not in the extractive sectors. Similarly, first-tier NICs followed Japan’s policy with respect to transferring some of their manufacturing firms (their domestic subcontractors) to the second-tier NICs in the late-1980s (Kasahara, 2013). Japanese industrial restructuring provided special incentives to the first-tier NICs to move into some of Japan’s export-oriented industries. The effective use of FDI to facilitate industrial upgrading and technological catch up has depended on a series of policy initiatives by the host countries (Akyuz et al., 1998). The regional industrial restructuring process, which is closely associated with contemporary regional integration, is a ‘top-down’ rather than a ‘bottom-up’ process (Kasahara, 2013). The unprecedented rapid and sustainable growth led to the transformation of the East Asian economies from poor exporters of primary products to sophisticated producers of high value-added manufactured goods (Chang & Evans, 2005). In the post-Second World War period, a small set of countries in East Asia stands almost alone in having significantly improved their position in the world hierarchy of nations.

Their experiences of the first tier of developmental state NICs were compared to the second-tier to shed light on their process of structural transformation. They revealed strong economic performance accompanied by rapid growth and a manufacturing-based economy like the first-tier. The notion of a developmental state postulates the possibility of replication and is thus a model of how economies should operate, based on actual experiences (Ikpe, 2008). The structural transformation in a developmental state takes on various forms. For instance, in the case of East Asia, the developmental state was aimed at speeding up growth while

enhancing opportunities to participate in the modern economy through the expansion of public services such as education, health and agricultural extension. These states were associated with rapid industrialisation and the adoption of new technologies to move into higher value-added production activities. There was typically a shift from subsistence agriculture to more commercial, export-oriented farming, textile processing and other manufacturing, and service-based sectors (Kohli, 2004; Fritz & Menocal, 2006; 2007; UNECA, 2011).

The previous developmental states generally enjoyed the support of their constituencies because they were associated with promoting rapid economic growth and providing economic benefits to their people (Weiss, 2000; Leftwich, 2002; Chang, 2003a). The ruling elites in these countries demonstrated high levels of commitment to poverty reduction and they began to address equity issues in the early stages of their transformation process. This development approach is commonly referred to as growth with equity or egalitarian growth. The political elites depended on delivering growth with equity to strengthen further their legitimacy and support base (Booth, 1999; Yang, 2000). In addition, rapid and sustainable economic development generated a broader growth coalition and supportive policies, which sustained an institutional and political framework, and this success became the survival basis and legitimacy of the regimes in East Asia (Haggard, 1989). This does not mean that the state necessarily has a superior ability to identify a better course for the national economy, but it can deliver provision around organised economic activities during a time of major economic change (Chang, 1994).

One aspect of the East Asian miracle, which has received insufficient attention in the literature, is the issue of agrarian reform (i.e. agricultural land distribution or reform). Their practice of agricultural land distribution/reform helped to facilitate the subsequent growth of agricultural output and the transfer of agricultural surplus to non-agricultural sectors (Erik & Henry, 2004). In Taiwan, for instance, the redistribution of wealth from landowners to small farmers was equivalent to 14% of GDP. A similar process of land and other asset redistribution occurred in South Korea (Watkins, 1998). The agricultural land reform significantly contributed to poverty reduction, increased rural productivity and income, increased savings and investments, and political stability, and promoted the creation of dynamic economic interlinkages between the urban and rural sectors so that the benefits of growth were spread equitably across society (Stiglitz, 1996; Watkins, 1998; Chu et al., 2000).

The Asian developmental states reduced inequality via targeted policies and incentives, such as agricultural land reform, the introduction of high-yielding agricultural technologies and the development of human capital, which fostered upward mobility, including the lower-income classes of the society. In fact, it was only after the programme of land reform that investments in the social sectors bear the fruit of rapid and sustainable economic transformation (Watkins, 1998; Chu et al., 2000). Thus, effective and pragmatic state intervention could trigger a virtuous circle in the development process. The more inequality was reduced; the developmental state model could be legitimated and trusted by the nation (Chu et al., 2000). As Watkins (1998) explains:

For many experts on East Asian development, the evidence strongly suggests that the far-reaching agrarian reform, which includes land redistribution, improved credit, and efficient marketing infrastructure, is a precondition for optimizing the human welfare benefits of agricultural exports. Access to land, credit, and marketing infrastructure enable the rural poor to produce and invest for their way out from poverty. In turn, redistributive reforms in these areas helped to unleash the productive potential of the poor, reinforcing the linkages between high growth and a widespread sharing of its potential. Dynamic smallholder agriculture rather than large-scale commercial agriculture has been one of the foundations for growth in East Asia (Watkins, 1998:25).

Land-reform programmes were supplemented by the provision of extension services to ensure that agriculture was not only egalitarian, but also more efficient and effective. Land reform provided a cheaper food supply by improving agricultural productivity and production (Doner et al., 2005). In contrast, '[c]ountries from Latin America and Africa built agricultural growth strategies upon the foundation of enclave economies dominated by powerful commercial interests. The majority of the rural poor are excluded from participation in global markets, except as labourers on commercial farms' (Watkins, 1998).

To summarise, the concept of the developmental state assumed the role of the state in facilitating the structural transition from an agrarian to a modern society. The developmental state plays a social engineering role to obtain long-term economic development and achieve a high level of social well-being. The existence of committed political leadership, an autonomous bureaucracy equipped with sufficient capability, legitimate and context-specific institutions, and the existence of close and productive state–private sector relationships are a few necessary factors for a successful developmental state model. A developmental state shows a systemic commitment to adaptive and problem-solving approaches (which is a precondition for getting the right policies/strategies), to context-specific policy choices and institutional formulation. This distinctive political and institutional model should be considered as an option in a range of political economies with different levels of state autonomy, institutional coherence and authoritative penetration, and varying degrees of accountability and embeddedness, which are configured differently in each society.

An export-oriented development strategy, for instance, leads to equitable resource allocation, creating economies of scale and production efficiency through technological development, capital formation, employment creation and, hence, to achieving fast economic growth accompanied by human capital development. Rapid export growth has been an important feature of East Asia's remarkable record of high, fast and sustained economic growth. Another important strategy is agrarian reform (which depends on the domestic political condition); it is one of the important tools adopted by many of the developmental states to reduce poverty, address the legacy of dispossession, transform the structure of their economies and ensure equitable growth. This implies that agricultural land reform is a necessary condition for equitable rural development and poverty reduction. It also has the effect of increasing state penetration of rural communities, which is crucial to strengthen the state's capacity and the state–society coalition to ensure rural transformation. Overall, the development success of the East Asian developmental states, accompanied by the rapidly growing development of human capital, was achieved through proper public investment in the social sector. Based on the experiences of the East Asian countries, it is vitally importance for the

developmental state to promote agricultural transformation in particular and economic development in general. In addition, they showed how context-fitted, well-functioning institutions are vital to accelerate the development and transformation processes of a nation.

## **2.3 Theories of institutions**

Almost all the theories of institutions (the OIE, NIE and IPE) recognise the important role they play in the economic development. The significance of institutions and the way in which they work are shaped by the specific economic and political trajectories of a country. It is necessary, however, to take a closer look at the concepts of institutions and their evolution and design proposed by the various schools. The OIE and IPE are heterodox in outlook, whereas the NIE builds on more orthodox frameworks (particularly, neoclassical economics). For instance, the OIE is closely linked to evolutionary economics, which is quite distinct from the neoclassical paradigm. The OIE analysis focused on society's role in defining values, norms and institutions, without denying the interaction and feedback processes between the individual and society (Parada, 2002). The NIE School adopted an individualistic approach and its point of departure is the individual's rationality. In the analysis of the NIE, institutions are derived from the individual's behaviour through interaction with others (Chang, 2003a; Ford, 2011). In contrast, the OIE argued that individual rationality is not a sufficient condition but it is necessary; rather, an existing social structure is fundamental for building institutions. This is because individual rationality depends on cultural and institutional support (Hodgson, 2009).

### ***2.3.1 The old institutional economics***

The OIE, in the tradition of Thorstein Veblen and John Commons, understood institutions as a special type of social structure with the potential to change agents, including their purpose and preferences (Hodgson, 2006). At the same time, institutions are special structures to organise life and human relations, and are therefore, in turn, efficient factors of selection (Veblen, 1899). The phrase 'a special type of social structure' implies that not all social structures are institutions. For instance, social structures that include sets of relations that may not be codified in discourse are not institutions (Chang, 2002; Hodgson, 2006). An institution can exist only if people have similar beliefs and mental attitudes, because the mental representations of institutions are partly constitutive of that institution. Therefore, institutions are special types of social structure that involve codified normative rules of interpretation and behaviour (Searle, 2005). For Veblen, institutions are 'the customs and settled habits of thought common to the generality of man' (Veblen, 1919: 239). These evolutionary elements are rooted in culture and are explained by the historical movement of social structures. These social norms and customs solidified into institutions, which in turn, shape customs and habits of thought. The causal relationship between individuals and institutions underlies

Veblen's notion of cumulative causation<sup>13</sup> (Hodgson, 2009). It is the 'theory of a process of cultural growth as determined by the economic interest of a cumulative sequence of economic institutions stated in terms of the process itself' (Veblen, 1898: 398).

Veblen (1899) tells us that human life is a struggle for existence and it is a process of selective adaptation. The evolution of social structure has been a process of natural selection of institutions, in which institutions are both the object and the factors in the process of selection. Institutions are not only the result of a selective and adaptive process which shapes the prevailing types of spiritual attitudes and aptitudes but they are also special methods of life and human relations, so they, in turn, are efficient factors of selection. Indeed, variations in culture, customs and habits cause changes in social structures. Changes in material circumstances breed further change through human agency. Human agency is required for the continuity of development and serves as an engine for the process of economic development (Veblen, 1898). Veblen was neither holistic nor reductionist but moved between the social and individual aspects with methodological consistency. He recognised the multiple influences of the social aspect on the individual (Hodgson, 2004).

According to Veblen, humans have certain instincts that embody both potential and propensities. These instincts are inherited genetically and culturally, and manifest depending on the historical and material conditions in which individuals reside. This indicates that human nature adapts to the demands of the condition. These human instincts fall into two general categories, which are either advantageous or disadvantageous to the whole- social status (Veblen, 1899). His notion of growth rests in evolutionary systems and cumulative causation. Therefore, his concern was not with the short-term fluctuations in output but rather with the long-run structural changes and the composition of output. Thus, increasing output is not a sufficient (but it is necessary) condition for economic development. Rather, to realise sustainable economic growth, output must grow smoothly with the progress of technological advancement and the development of skills (Veblen, 1899). This is critical for Veblen because, in the very process of growth, the institutional fabric of the economy is transformed, and vice versa. Technology itself is an institution as both object and factor of selection, shapes institutions and the social mind-sets in the development process. Thus, technological progress has an evolutionary function, challenging existing institutions and power relations embedded in them (Ford, 2011).

Scholars such as Clarence Ayres, J.R. Commons and Wesley Mitchell, who follow the Veblenian tradition, place institutions at the centre of their analysis. They recognise the role of technology in economic growth and the non-automatic nature of its dissemination, as well as the centrality of cumulative causation in

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<sup>13</sup> In the writings of Veblen and Commons there is both upward and downward causation; individuals create and change institutions, just as institutions mould and constrain individuals' aspirations and motivations. Re-constitutive downward causation from specific social structures to individuals operates by creating and moulding habits (Hodgson, 2009). Institutions are social structures that can involve re-constitutive downward causation, acting to some degree upon individual habits of thought and action. The existence of re-constitutive downward causation does not mean that institutions directly, entirely, or uniformly determine individual aspirations, merely that there can be significant downward effects (Sperry, 1991; Hodgson, 2003a; 2006; 2009; Hodgson & Knudsen, 2004).

development. For institutionalists, the human element (such as status, group identity and ideology) is at the centre of causation between individuals and institutions, and plays a dynamic role in eroding ineffective institutions in the economy. Economists such as Clarence Ayres, J.R. Commons and Wesley Mitchell saw the Veblenian insight as one in which policy could be the tool to fashion capitalist institutions in a way that would promote efficiency and limit its tendency to reproduce and deepen economic inequality (Ford, 2011).

Commons believed in the institutionalised mind, but he did not develop a theory of how the individual mind was institutionalised. He believed that institutions moderate behaviour, enabling and liberating individuals and groups, as well as constraining those (Commons, 1931). Commons proposed his famous definition of institutions as being collective action to restrain, liberate and expand individual action (Hodgson, 2003b). The relationship between collective and individual action is the foundation of ‘going concerns’<sup>14</sup> and their working rules, i.e. the institution is equal to its ‘going concern plus its working rules’ (Chavance, 2012). The notion of collective action is important to Commons’ institutional approach. This notion concerned what Commons called ‘collective will’, i.e. the overall outcome of the individual and collective decision-making processes. The idea of collective will does not undermine the role of individual decisions. Commons’ standpoint does not represent extreme individualism or extreme collectivism (Parada, 2001). His approach is distinguished from individualist institutional theories by the prominence he attributed to ‘collective action’, and by his hierarchical view of the ongoing concerns, with the working rules that keep them going (Chavance, 2012). Commons believed that the formal institutions emerge and change only through the actions of decision-makers and legislators who change legislation (Parada, 2001).

Institutionalism gained wide acceptance at a global perspective as economists began to apply the institutional paradigm to the study of development issues and international economics (Peach, 2003). The OIE has survived to inform modern economists and it has made a particularly useful re-emergence in the field of development economics (Ford, 2011). The OIE highlights the role that habits, norms and institutions play in directing human behaviour/perceptions without discarding the rationality of individual behaviour, albeit constrained by the social and economic environment (Parada, 2002). However, not all the ideas of institutional economics emerged at the same time; rather, institutions were nurtured over time through processes based on ‘learning- by-doing’. In the mid-1970s, there was a development in economic thought bearing the name ‘institutional’, which emerged from so-called neoclassical economics. It was termed qualified institutionalism, so as not to be dismissed as a return to a radical Veblenian school, and the NIE was born based on the so-called neoclassical economics approach.

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<sup>14</sup> ‘The going concerns animated by a common purpose, governed by common rules of its own making, and the collective behaviour in attaining that common purpose. Individuals who are members of several going concern, from the small family to the state itself, the largest going concern’ (Commons, 1924: 145 quoted in Chavance, 2012).



### 2.3.2 *The new institutional economics*

Conventional neoclassical economics takes the institutions of the modern Western economies as its basic framework for the rest of the world. This economic model is based on institutions such as well-defined property rights, perfect information and frictionless transaction costs, to mention a few. Moreover, since the market is viewed as the most efficient mechanism for allocating resources, alternative institutional arrangements become less relevant. For instance, because minimal state intervention is assumed, government interventions are warranted only when market failures occur in the economy (Lin, 1989; Chang, 2002). Nevertheless, in the real world, different institutions exist parallel to the market institutions for better performance of economic development. Although rooted in neoclassical economics, the NIE incorporates many of the social sciences to focus on the social and legal norms and rules (institutions) that underlie economic activity. Douglas North and Oliver Williamson<sup>15</sup> have become synonymous with this branch of institutional economics. The underlining assumption is that institutions emerge because of the interaction of individuals, and that certain institutions exist in the market because they are assumed to have low transaction costs (Ford, 2011). The NIE considers that the transaction costs, which are determined by institutions and institutional arrangements, are the key to economic performance (Williamson, 2000). Institutional arrangements determine the modes of managing transactions and contractual enforcements. Institutional arrangement is probably more accurate than the most popular use of the term ‘institution’ (Williamson, 1993). According to Rutherford (1995), the basic distinction between the NIE and the OIE is:

New institutionalists see the development and functioning of institutions largely in efficiency and economising terms (rational individuals are ‘economizing’ in behaviour), as opposed to the old institutionalist who tends to see, many other social and political factors (status, group identity, ideology, and economic and political power) as also involved. Indeed, new institutionalists have often dismissed the old institutionalism as lacking in theoretical rigor and containing few, if any, interesting insights, while old institutionalists have tended to be equally dismissive of the new institutionalism, finding it based on the same set of basic neoclassical assumptions they rejected long ago (Rutherford, 1995:444).

Williamson placed the emphasis on transaction costs, adapted from Coase’s (1937) ‘The nature of the firm’. Hence, Williamson’s interest in institutions focused on governance structures such as transactions and negotiations among different economic actors. The mutual interdependence of different economic actors in the economy requires a governance structure that can organise their economic activities. The challenge is that changes in these structures change the comparative costs, such as the institutional environment, and this shifts parameters for the actors (Williamson, 1979; 1998; 2000; 2003; 2010). Although he recognises that these economic agents may try to influence the legal institutions, this is not a decisive factor in his analysis. In the end, this leads him to praise the institutional reforms of the Washington Consensus, which places private property and contract enforcement at the heart of the policy agenda (Herrera, 2006). This implies that institutions that protect property rights are crucial to economic growth and promote investments. Like

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<sup>15</sup> Williamson coined the term ‘new institutional economics’ in 1975 to distinguish the NIE approach from the old institutionalism.



Williamson, North was not keen to replace neoclassical theory and maintained the assumptions underpinning the microeconomics of competition for scarce resources. Therefore, the study of economics as a theory of choice is subject to constraints. For North, institutions are central to economic activity and are developed by economic agents to minimise uncertainty (North, 1993). Therefore, North defines institutions as:

Institutions are the rules of the game in society or, more formally, are the humanly devised constraints that structure human interaction, provide incentives for individuals to engage in productive or unproductive (for that matter) economic, social or political interactions. They are composed of formal rules (statute law, common law, regulations), informal constraints (conventions, norms of behaviour, and self-imposed codes of conduct), and the enforcement characteristics of both (North, 1993:5).

An institution is a set of formal and informal rules of conduct that facilitate coordination or govern relationships between individuals or groups in the economy. North argues that institutions provide a stable structure for cooperative human interactions in the presence of incomplete information and many players, especially from the perspective of increased transaction costs (North, 1990). He distinguishes institutions (the rules of the game) from organisations, which are the players of the game, grouped together by similar functions and purposes (North, 1990; 1993). North believes that institutional change or modification takes place when individuals attempt to maximise behaviour. He argues that individuals and organisations, with their bargaining power in a society, are also the agents that have a stake in maintaining the system. For North, the primary driver of institutional change and economic growth is the entrepreneur within an organisation. Entrepreneurial learning dictates both the rate and direction of economic growth and change. The more competitive the market is, the higher the rate of learning, resulting in more rapid economic change. The type of learning that takes place governs the direction of economic change and reflects the mental modes of the individuals involved and the competitive structure, which is determined by the institutional context. The primary incentive structure is, of course, strong property rights.

North elaborates on the relationship between institutions and transaction costs as ‘the neoclassical result of different markets only obtains when it is costless to transact. Institutions matter when it is costly to transact, institutions, and specifically property rights, which are crucial determinants of the efficiency of markets’ (North, 1993: 2). However, the real-world circumstances are opposite to these underlying assumptions of the NIE rooted in the neoclassical economic theory because market failures/imperfections are inevitable in practice. The NIE’s perspective of institutions is anchored in ‘transaction costs theory’. There is always some efficiency rationale behind the evolutionary process of institutions aimed at the reduction of these ‘transaction costs’. He further argues that the state is the institution that enforces the so-called rules of the game. This indicates that the NIE sees the state as the necessary third-party enforcer of the rules of the game that lower ‘transaction costs’ and guarantee ‘property rights’ (Parada, 2002; Chang, 2002). With regard to perfect competition (in theory), North argues that this holds true only if ‘property rights’ are established and sustained as a condition for competitive markets. ‘It is politics that shape economic performance because they define and enforce the economic rules of the game; therefore, the heart of development must be the creation of politics that will create and enforce efficient property rights’ (North, 1993:7). In this case, North

says that institutions are the entities that can enable economic agents, particularly by improving efficiency, and that they are not only constraints. The state has a place as far as it supports the objective of maintaining the institution where it is existent and nurturing it where it is deficient. The NIE is theoretically bound to a notion of the ‘competitive-market place’ as the natural ordering of economic life.

To summarise, the NIE theory is individualistic and deductive in nature. Indeed, the World Bank adopted the philosophical underpinnings of the NIE in the early 1990s, as ‘institutions matter’ became universal in the form of ‘global-standard institutions’ (GSIs) in the Anglo-American economic context. Developing countries are routinely told to adopt ‘best practice’ or the global-standard institutions used by the richest countries, when many of them clearly do not have the capabilities to run such institutions effectively. The GSIs are very subjective and they ignore the fact that the same institutions can perform different functions depending on each country’s historical, political, economic, social and cultural contexts (Chang, 2000; 2011). In general, we understand from the NIE’s arguments that institutions are the rules of the game, with emphasis placed on the minimisation of transaction costs and the establishment of strong property rights through minimum state intervention in the economy. The establishment of robust property rights and ‘good institutions’ that nurture ‘good governance’ has become a common ‘strategy’ for promoting economic growth worldwide since the onset of the SAPs and Washington Consensus (Groenewegen et al., 1995). In this context, Chang offers a direct response to the NIE, which was based on the neoclassical economics. Chang’s argument in the IPE is a methodological return to the OIE and criticises the assumptions of the NIE.

### ***2.3.3 The institutional political economy***

The IPE is a methodological return (i.e. it developed based on the insights of the Veblenian institutional theory) to the OIE and brings the insights of the Veblenian institutional theory to the field of development economics. It argues that institutions are a necessary but not a sufficient condition for understanding the nature of economic development. Institutions do matter but the way in which they are understood is crucially important. For instance, institutions may be good and natural in developed countries but when they are transplanted in the developing countries, this can have great consequences. Institutions are far more complex in practice and sometimes societies may hurt because policy-makers misunderstand them (Chang, 2002; 2003b; Chang & Evans, 2005). The IPE argument was developed as a remedy for misconceptions about the nature of the relationship between development and institutions. From the IPE perspective, institutions are regarded as ‘both constraining people’s behaviour as well as being constitutive of their motivations and perceptions; IPE employs a “political economy” approach in analysing both the role of the state as well as the market’ (Chang, 2002; 2003a; 2011; Chang & Evans, 2005; Hodgson, 2006).

From the IPE perspective, institutions are ‘systematic patterns of shared expectations, taken for granted assumptions, accepted norms and routines of interaction that have robust effects on shaping the motivations and behaviour sets of interconnected social actors’ (Chang & Evans, 2005:99). This indicates that institutions are not taken as given, but run much deeper; indeed, into Veblen’s customs and habits of thought that take

human nature (behaviour) as one social element. Therefore, the IPE acknowledged the idea of the OIE's context, which does not take human motivations and perceptions as given, but rather as 'being fundamentally shaped by the institutions surrounding the individuals. This is because institutions embody certain values (such as worldviews, moral codes and social norms) and by operating under these institutions, individuals inevitably internalise some of these values thereby altering themselves' (Chang, 2002). This constitutive role of institutions is a central hallmark of the institutionalists' approach and differs from the NIE, which sees institutions as a product of utility, maximising behaviour by individuals with preformed preferences (Chang, 2002; 2003a; Chang & Evans, 2005; Hodgson, 2006).

This constitutive role of institutions operates through three basic mechanisms. First, institutions have the capacity to shape what human beings perceive to be in their interests; second, the common issues that can be infused by institutions are valid for political action; and finally, institutions shape what is perceived to be legitimate forms of such political action (Chang, 2002). Institutions are constraining as well as constitutive of individuals' motivations and perceptions, and this can be understood as a two-way causal relationship, i.e. from individuals to institutions and from institutions to individuals. From the perspective of the NIE, it is a one-way causal relationship from individuals to institutions, as cause and effect, respectively (Chang, 2002; Chang & Evans, 2005; Hodgson, 2006). Proponents of IPE acknowledged that institutions fundamentally shape the motivations of human beings. Institutions are shaped by human motivation and perceptions as well. The institutionalism of IPE goes much further to see at least the 'temporal priority' of institutions over individuals rather than 'temporal priority' of individuals over institutions. The IPE sees institutions not as simply constraining individual behaviour, but also as constitutive of individual motivations and perceptions (Chang, 2002; 2003a). In contrast, the NIE considers individual motivations (which they call individual preferences) as the ultimate factors that determine institutions. This indicates that institutions may be able to shape behaviour of individuals by punishing or rewarding them, but they are not able to change the motivation of individuals because institutions constrain human behaviour (Hodgson, 2000; 2006).

Institutions packaged as 'good governance' or GSIs by the developed countries are not necessarily beneficial to the developing countries because these institutions are imposed (or adopted) using a 'one-size-fits-all' approach, irrespective of the developing country's particular context. The developed countries took decades to develop these institutions based on learning-by-doing in their own contexts (Chang, 2003a; 2005; 2011); hence, these institutions may not be applicable in the developing country to accelerate development. The current developing countries should not try to adopt institutions using 'one-size-fits-all' approach but should nurture or adopt institutions based on their own contexts. The imposition of unnecessary institutions may come at the expense of other relevant institutions. Chang demonstrates that once the developed countries reached industrial supremacy or secured the highest status in the world economy, they shifted their policy stances accordingly. They began to advocate free trade, to prevent the outflow of skilled workers and technologies, and became strong protectors of patents and trademarks (copyright). They turned states in

developing country into ‘gatekeepers’, malevolently ‘kicking away’ the development ladder – which had served them so well – to ensure that other latecomer countries could not follow suit (Chang, 2002; 2003b).

Most of the current developed countries actively used policies, such as infant industry protection and export subsidies, to promote their development process. For instance, the United States continued to use protectionism until it emerged as the world’s leading industrial superpower, after which it became the vanguard for ‘free trade’, even though it had acquired such supremacy through the nationalistic use of heavy protectionism (Chang, 2003b). As Chang argues, the current discourse on institutions and development suffers from two theoretical drawbacks. First, it assumes that the causality runs from institutions to economic development, ignoring the possible effects of development on institutions. Second, this causality relationship between institutions and development is theorised in a rather simplistic, linear and static way. Therefore, this discourse fails to recognise that this relationship is not linear, but differs across societies, and changes over time, even within the same society (Chang, 2011). By focusing almost exclusively on one direction of causality, from institutions to economic development, the NIE’s dominant discourse on institutions and development gives us only a partial picture (Chang, 2011). One needs to look at the causality in both directions to gain a comprehensive understanding of this interaction to give the appropriate policy advice to developing countries to nurture responsive institutions.

Chang (2011) provides some evidence of how economic development changes institutions. For instance, increased wealth from economic growth may create a greater demand for higher-quality institutions (such as political institutions with greater transparency and accountability); greater wealth allows for more affordable and better institutions; economic development also creates new agents of change, demanding new institutions. If the causality runs in the direction of development to institutions, resources being expended by developing countries to adopt the GSIs might be better used for other policy aspects that could stimulate economic development more directly, or promote institutional development that could also foster economic development. Hence, the developmental state provides a classic example of how institutions make a difference in economic change, which, in turn, improves the quality of institutions and helps to reshape relative trajectories of economic growth. This seems to acknowledge that sound economic policy is not enough and that the institutional context cannot be ignored (Chang & Evans, 2005). The state needs to provide the formal institutional framework in which effective and developmental economic activities can proceed safely, securely and peacefully, although the state should not attempt to do this better than the market (Leftwich, 2005a). From this argument, it is clear that there is a problem in the market–state dichotomy in extreme cases that either market or state failures are an inevitable result. Thus, based on the experiences of the previous developmental states, there must be a proper mix of market and state, and this can be achieved only through building diverse institutions to address these failures.

In general, proponents of IPE are interested primarily in the institutional functionality and integrity of the entire macroeconomic system of a given countries and how this relates to the institutional and market dynamics of the global economy (Chang, 2002; Chang & Evans, 2005; Evans, 2005). The argument is that

the formal and informal institutions are determined by the institutional arrangements that pertains each country. ‘These institutional arrangements, in turn, are the product of a particular leadership style, organisational cultures, social histories, moral norms (with respect, in particular, to corruption), informational flows, transactive relations, and a constellation of ideas about institutional life’ (Swilling & Annecke, 2012:91). It is obvious that institutions matter, that they are subject to change, and that people are trying to clarify social choices with regard to alternative institutional changes to improve the economic efficiency and welfare performance of the economy. The basic reasons why institutions are indispensable are the limitations of both human ability and the environment in which individuals live. An individual as a unit of production is too small to internalise much of the gains from economies of scale and externality in the economy. Cooperation and integration are inevitable due to these limitations, thus institutions are an appropriate tool to realise cooperation and integration.

To summarise, the last few decades have witnessed the rise of not only orthodox NIE, but also heterodox institutional economic theories such as IPE (Chang, 2007). Experiences illustrate that building successful institutions depend on a country’s specific innovations and adoptions. Learning more about the real-life experiences of institutional change could help to enrich theoretical understanding by revealing aspects of reality that theoreticians have neglected or failed to grasp due to the inherent limitations of their theories. This could help countries to build context-fitted institutions, which can serve multiple functions in the economy (Chang, 2002; 2007). ‘The functional multiplicity of institutions makes the task of building institutions most difficult and challenging, as there is no inevitable simple relationship between the desired functions that need to be performed and an institutional form. Unfortunately, this point has been rather neglected in the mainstream discourse on institutions and development’ (Chang, 2007: 5).

Building institutions is not merely a technocratic exercise; it needs the involvement of different stakeholders<sup>16</sup> and society as whole. All institutions, including the market, are defined in relation to the structures and obligations of the relevant actors. These rights and obligations are ultimately a political act – all institutions, including the market, cannot be free from politics (Chang, 2002; Hodgson, 2006). However, in practice there is no single approach to building institutions because of the different contexts of countries. Countries build either different institutions to address the same issue concurrently, or different institutions to address different issues, depending on their contexts. Emphasising institutional diversity across time and place is relevant but this does not mean that there are not common features in either building institutions or institutional practices across countries. There are institutions that could apply universally, regardless of time and place, and others with relatively minor modifications. However, the applicability of some may be limited due to domestic capabilities, domestic political conditions or international politics (Chang, 2009).

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<sup>16</sup> Stakeholders generally defined as including all interested economic agents and social groups (public, private sector, farmers, urban residents and civil society). In broad terms, stakeholders have three key functions: decision-making, coordination of views and activities, and oversight (controlling, monitoring and evaluation).

The existence of diverse and context-specific social, economic, or political institutions has a powerful effect on the economic and social development process, and they can either facilitate or hinder the process of economic growth, depending on the context. States that have effective institutions can facilitate social cooperation and channel resources towards boosting productivity, and this can have a considerable impact on the development process. The institutional capacity of a state can affect its ability to promote a variety of technologies and involve various stakeholders by providing incentive and disincentive measures. When constructing a developmental state in latecomer countries, it is important to focus on a country's unique institutional architecture and policy orientation, because far-sighted institutions will determine its capacity to formulate and implement development policies and programmes. Getting institutions wrong can result in failure. A developmental state must be able to mobilise resources for public investment, promote industrialisation based on coherent industrial policies and strategies, and promote and predicate its development agenda using a participatory approach.

## **2.4 The need for and the rise of the developmental state in Africa**

For approximately fifty years since independence, African policy discussions were essentially limited to the debate about whether Africa would be better-off following in the footsteps of the its erstwhile colonial masters and adopt undiluted capitalist institutions, or if the socialist alternative was more suited to accelerate development in Africa (Fine, 2010; 2011). Most post-colonial African states are underdeveloped and many of them described as developmental failures (Edigheji, 2005). Contemporary African leaders are preoccupied by debates about how to accelerate and sustain development in post-colonial African states; some advocate state intervention as a strong agent of development and others a free-market economic system (Stark, 2010). There is a lack of evidence to support the proposition that less state intervention facilitates more sustainable economic transformation (Kohli, 2004). The literature suggests that successful state intervention involves close cooperation between the state and society, as well as insulation of the bureaucratic elite to minimise corruption, rent-seeking<sup>17</sup> practices and state capture by interest groups (Evans, 1995).

In addition to the role of the state, there are numerous variables that influence a country's economic performance, including global economic conditions, resource endowments, demographic factors, patterns of savings and investments, levels of technology, entrepreneurship capacity, human capital and institutions (Kohli, 2004). An activist state has been considered as a key ingredient in rapid and sustainable development and conversely, malfunctioning states have contributed heavily to developmental failures in many SSA countries (Evans, 1995). Therefore, the recent economic crisis proved that unregulated markets are unworkable and unsustainable in the long-run because markets are not always self-regulating. This gave

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<sup>17</sup> Rent-seeking practices divert scarce economic resources from productive activities to misallocation and wastage, thus limiting economic growth and distorting the overall development process. It is also the use of public resources to obtain economic gain without reciprocating any benefits to society through wealth creation. Rent-seeking poses a threat to the credibility and legitimacy of a government and can decay its structures and capacity. It has unmitigated negative long-term on political and economic development. For instance, bureaucratic corruption is one of the rent-seeking behaviour in developing countries.



credibility to state intervention in the economy and made the developmental state model a more convincing development ideology for the latecomer developing countries (Edigheji, 2010; UNECA, 2011). Getting the ‘prices wrong’ from a free market perspective may well create conducive grounds for renewing the notion of the developmental state for sustainable development and transformation.

The state ideology and institutions are considered as the main determinants of the political capacities of a developmental state. States with extraordinary commitment to economic growth, a close alliance with economic agents, control of interest groups and having well-developed professional bureaucrats tend to be more capable of defining and implementing an agenda of economic transformation. Without a coherent development ideology and effective institutions, it is difficult to pursue development objectives. For instance, predatory states that lack a developmental ideology face many challenges (Evans, 1995). “Economic resources controlled by the state are instead likely to be put to corrupt use and end up in the hands of elites for private consumption, leading to failed efforts at state-led development (Kohli, 2004:22).

Transforming African countries from the existing low-income agrarian to high-income industrial economies remain a major development challenge and should put at the forefront of the development agendas of countries. In the present global situation, the conventionally accepted wisdom of the free market-led development model as a necessary condition for transforming backward economies to a high level can no longer be taken at face value. In the aftermath of the 2007/08 global financial crisis, many Western economies were left in shambles, resulting in major state interventions (UNECA, 2011; UN-Habitat, 2014). This indicates that the market system does not provide efficient allocation of resources in a sustainable manner due to natural monopoly, existence of externalities and informational asymmetries, and other aspects of market imperfections. Therefore, to strengthen the role of the market and proper resource mobilisation in developing countries unprecedented state intervention should be at the centre to correct widespread market failures, market formation, and capital transformation to accelerate the development process.

The developmental state literature has proceeded primarily, but not exclusively, by providing a cumulative basket of successful case studies, with East Asia at the fore, and a few bright spots elsewhere such as Brazil, Botswana and Mauritius (Fine, 2011). Although there were countries that claimed to be ‘developmental state/s’, but they were unsuccessful due to different factors. For instance, the failure of the South African state to be developmental owes much to its capacity to neutralise pressure for more progressive policy and coincidentally to pre-empt the creation of that pressure in economic, political and ideological arena (Fine, 2010). Indeed, the recent global financial meltdown has impelled made many African scholars and policy-makers to rethink the role of the (developmental) state in Africa.

#### ***2.4.1 Towards the need for a developmental state paradigm***

The post-Second-World-War era initiated a move towards greater state involvement in the economy. African countries passed through a series of policy regimes such as import-substitution strategies, export-oriented



policies, the SAPs, privatisation and commercialisation, and most recently, a liberalisation policy, among others (Kohli, 2004). The reigning developmental state ideology was (in part) fuelled by disappointing outcomes of the neoliberal paradigm i.e. there is a renewal of interest in the developmental state, after a decline in the decade around the turn of the millennium. In the recent literature, the idea of developmental state has been most closely associated with the rise of East Asian economies (Fine, 2010). However, from its early days, the United States was a pioneer of the developmental state paradigm. The core developmental theory, like the ‘infant industry argument’ was invented by none other than the first American finance minister (Treasury Secretary), Alexander Hamilton, in his 1791 ‘Report on the subject of manufactures by the treasury secretary’. However, it was a few decades until the pro-development faction came into being and made it possible to implement Hamilton’s programme. From the 1830s until the Second World War, the United States remained the most protectionist country in the world. Especially, between the mid-nineteenth and mid-twentieth centuries the US government invested heavily in infrastructure, education, and R&D, particularly in agriculture (Chang, 2002; 2007).

Even after the Second World War, when the country had achieved industrial supremacy and started championing the cause of free trade and the free market, the US developmental state practice survived this different approach. During the entire post-Second World War period, the United States had a ‘hidden developmental state’; i.e. it had a very strong developmental network state, as opposed to the developmental bureaucratic state of East Asia. It focused on translating cutting-edge technological research into commercial use through cooperation with a network of people who had high levels of technological expertise, situated in various state agencies, industries, universities and other research institutes (Block, 2008). This indicates the developmental state model continued to apply by developed countries today, especially in times of economic crisis. For example:

Responding to the crisis in 2008, the United States Government under former President George Bush announced a \$700 billion bailout for the US financial market, and in the following year, the Obama administration introduced a fiscal stimulus package of \$787 billion. In the UK, the state injected £37 billion to bail out its financial institutions. Similarly, governments across the world introduced stimulus packages, all attesting to the increasing role of the state in economic recovery and development (UNECA, 2011: 95).

All these situations point to the integration of market and state to promote socio-economic development, address market failures, and transform the market and capital for industrialisation and modernisation. In practice, developing countries face daunting market failures and institutional inadequacies, which create vicious circles and poverty traps in their economies. These pitfalls can be adequately addressed only by means of active state intervention. Therefore, the developmental state paradigm competes as one of a viable alternative development approach to neoliberal ideology (pure capitalism) to accelerate economic growth and, at the same time, limit ‘socially wasteful economic rent’<sup>18</sup> activities. This implies that in a

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<sup>18</sup> Economic rent becomes wasteful only if self-interested individuals use it to create personal wealth at the expense of the society, and only if the state is incapable of using it for the benefit of the society in the form of public investments. Nevertheless, economic rent is relevant for the accumulation of social, physical and human capital by promoting public

developmental state, considerable attention has to pay to the capacity of the state (i.e. state bureaucracy/institutions and policy management) to achieve development goals/objectives. This is because one of the defining features of developmental states is that they are concerned primarily with the structural transformation of modernising economies by strengthening state capacity and institutions (Evans, 1995). It is true that the legitimisation of developmental states is derived primarily from their ability to promote sustained economic growth and development by suppressing individual interests that affect the economic interest of the masses (Chibber, 2002).

Therefore, the rationale behind promoting a developmental state model in the African context rests largely on the inability of previous development approaches to diversify and transform its economies, and generate steady and sustained high growth rates (Benedict, 2014). The significance of a developmental state in the development discourse is indispensable though there are renewed debates over what kind of state would boost the socio-economic and political development of the continent (UNECA, 2011; Mkandawire, 2012; Benedict, 2014). “African states have three major development tasks for achieving economic transformation: planning the process, formulating appropriate policies and implementing the plans and policies. Economic transformation in Africa demands the state to play a central role; using a comprehensive development framework in planning, articulating and implementing policies aimed at ensuring efficient allocation of ‘resources’ (Benedict, 2014:106).

Most African leaders have reached a consensus on the inability of the neoliberal ideology (pure capitalism), to achieve the African Renaissance, and some countries have claimed the ‘developmental state’ model as an alternative to the official development model (UNECA, 2011). For instance, Zenawi, late Prime Minister of Ethiopia, keenly promoted a developmental state ideology in Ethiopia in particular and for Africa in general as one of the alternative development ideologies. As a politician and a scholar, he contributed important theoretical works and analyses on the negative impact of neoliberalism on the developing economy (Zenawi, 2006). If there is to be an African Renaissance in the twenty-first century, there has to be a major paradigm shift rather than a marginal adjustment in the existing free-market development model (UNECA, 2011).

Market forces alone cannot induce economic growth in developing countries (Sindzingre, 2004). In Africa, particular attention has been given to ‘state commitment and capacity because the way states function is increasingly seen as one of the most important factors affecting development in the poorest countries’ (Fritz & Menocal, 2007:531). The ‘Asian Tigers’ have attracted the widespread attention of academicians and development practitioners alike because of their shift from agrarian economies to paragons of

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and private investment (Evans, 2010). Economic rent has often been the origin of capital accumulation, which is known to have made possible sustained development in many of what are today the most developed countries and therefore, it is expected that the current developing countries use their potential economic rent for capital accumulation, which will be critical to address their political-economy problems and structural constraints.

industrialisation and sustainable development. Their developmental state model serves as a template for rapid and sustained development:

The concept of the developmental state continues to be the most fertile conceptual issue in development economics more than a decade after its formulation, for it has explained the exceptional growth performances of East Asian countries as resulting simultaneously from a specific combination of economic, political and institutional structures. It has, however, most often ignored by orthodox studies in development economics and viewed by quantitative analyses as belonging to political economy rather than pure economics (Sindzingre, 2004:2).

The developmental state is not an end in itself but an instrument to attain specific objectives (in the case of African countries, catching up) such as rapid economic transformation. Therefore, what matters is the collective aspiration and intent to develop and transform the citizenry to a better standard of living (Mkandawire, 2001; 2010). To achieve this objective, Fritz & Menocal (2007:534) recognise:

A strongly committed leadership and competent bureaucracy should be in place as common factors among developmental states because the developmental orientation of a state is not a permanent condition but rather a dynamic feature with a limited time horizon. Such leadership provides the vision and capacity to transform society; it gives priority to national development and eschews 'self-enrichment' and short-term political gains.

In addition, aspiring developmental states should focus on providing the appropriate framework for institutional innovation and determine the adequacy of their institutions, mobilise the sustainable use of scarce resources, invest in the development of human capacity, consolidate regional cooperation, and facilitate their transformation agendas. In short, the developmental state model is a relatively good alternative for the renaissance and transformation of the existing stagnant political economy of the continent, if the nation states adopt and practise it in the contexts of their respective unique environments. The developmental state arguably offers the greatest promise for Africa given the diversity (heterogeneous characteristics) of countries differing in statehood formation, colonial and post-colonial history, and social and cultural pacts. The nation-state in the rest of Africa – except Ethiopia –has a more recent history, stemming from the Berlin Conference of 1885 ('Scramble for Africa') and its post-colonial definition at independence (Geda & Degefe, 2005; Geda, 2008). This is one of the main arguments for regional integration as a possible (viable) development path. From this perspective, it is difficult to use the Ethiopian case (discussed in chapter 4) as a model for the developmental state in other African countries. However, this does suggest that other African countries, which have a colonial history, may not be able to copy the Ethiopian model – instead they will have to adapt developmental state thinking to their respective contexts.

#### ***2.4.2 Debates on the need for developmental states in Africa***

The concept of the developmental state has remained an ongoing debate among different disciplines. Discourses related to the developmental state in Africa pivoted on two major arguments. The first is whether the establishment of the developmental state is feasible because of the continent's peculiar realities and the global environment, which has changed significantly since developmental states were introduced in East Asia. The second has focused on what form and shape the envisaged developmental state should take. There

has been widespread doubt about the prospects for the emergence of a viable developmental state in Africa, partly because of the generally poor record of state-led development efforts by some post-independence African governing elites (Mkandawire, 2001). Capacity deficiencies across all the institutions ranging from state institutions non-state civil societies to the private sector have adversely affected governance systems on the continent and will continue to do so unless they are adequately addressed (UNECA, 2005). This cumulative reality has pushed the conclusion that Africa lacks adequate political superstructure, committed leadership, and well-articulated, context-specific institutions, which are necessary for the pursuit of developmental policies and strategies (Birdsall, 2007).

Another doubt about the prospect of a viable developmental state in Africa arises from the conditions that underpinned the emergence of these states in Asia, which were unique or specific to their context at that time. Moreover, the global political and economic environment changed, particularly with the emergence and dominance of the neoliberal model. In the transformed global environment, the constraining forces to interventionist logic have been the emergence of multiple, autonomous development actors, and global agencies (Beeson, 2006). The argument is that even the Asian developmental states would not necessarily replicate their success if they were to attempt it in the current global context. Therefore, it would be ineffectual for Africa to take the developmental state path. This argument emanated from the literature on the developmental state, where some advocated the ‘impossibility theorem’, i.e. the proponents of this thesis asserted that the developmental state approach is not viable in Africa and, more specifically, expressed scepticism as to whether the East Asian development experiences could serve as a model for Africa. Some of the reasons outlined are: (1) Lack of ideology and dependency behaviour of African states. (2) The African state is not able to commit itself to development strategy and capture by special interest groups. (3) Lack of technical/analytical capacity; (4) the changed international environment did not permit for infant industry protection; and (5) poor performance records of the past due to lack of developmental commitment and the persistence of ‘neo-patrimonial’ tendencies<sup>19</sup> (Mkandawire, 2001).

Although the World Bank’s 1993 report acknowledged that the developmental state in East Asia played a major role in its economic transformation, it concluded that Africa could not have built an effective developmental state like the East Asian countries (World Bank, 1993). The report reached such a conclusion because of the following factors: (1) ‘Ideological, Africa simply could not imagine development’. (2) ‘Rent-seeking, the argument being that the state was captured by rent-seekers who insisted that the state pursues their particular interests at the expense of national interest’. (3) ‘African states simply did not have enough

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<sup>19</sup> Countries in the Global South can be categorised as cohesive-capitalist developmental states, fragmented-multiclass states and neo-patrimonial states. Many developing country states are fragmented-multiclass states, including many Latin American and some Southeast Asian countries. The prevalence of fragmented-multiclass states in the developing world underlines the twin facts that the process of state formation has proceeded quite far in much of the developing world but that such states remain troubled institutions, especially in the light of the many tasks they have set for themselves. Highly effective cohesive-capitalist developmental states are rare in the developing world and are concentrated mostly in East Asia, and a few in Africa and Latin America. The grossly dysfunctional neo-patrimonial states tend to be concentrated in SSA countries (cf. Kohli, 2004).

human resources and technical capacity to pursue the developmental state model'. (4) 'Globalisation had closed the window for state interventionism as it left little room for states to intervene in their respective economies' (World Bank, 1993).

The 'impossibility theorem' in general advanced based on the following three arguments: (1) 'The East Asian developmental state institutions are contextual and time-specific and beyond emulation'. (2) 'The developmental state is unfamiliar to Africa, but unique to East Asia because it was made possible by "Confucian societal values" such as education, hard work, and business ambition, and a culture not transferable'. (3) 'It is neither possible to transfer the institutions of developmental states nor emulate the approaches used because these states are transitional and arise out of specific geopolitical and historical contexts' (Onis, 1991; Hong-jong, 2003).

In contrast, the proponents of the possibility thesis in Africa asserted that the current external and internal environments are relatively more tolerant (if not very conducive) for the adoption of the developmental state in Africa than was the case during the era of SAPs. There have been many changes in the global political economy emanated from the success story of the East Asian developmental states, the failure of SAPs in most developing countries, the rise of new southern economic powerhouse, the consolidation of South-South political and economic integration, as well as the consolidation of continental and regional integration to mention a few. All these factors could create fertile ground for claiming an alternative development model outside the neoliberal fence by breaking the 'no alternative perception'. Therefore, the 'impossibility theorem' on the viability of the developmental state in Africa does not hold water because there are African countries that have claimed and practised a developmental state model, both recently and in the past.

The proponents argued that the blanket generalisation about the poor performance and lack of potential for African countries to achieve rapid state-led development is just as biased as the usually unqualified regard for the achievements of the East Asian developmental state model (Mkandawire, 2001; UNCTAD, 2007; UNECA, 2011). The arguments related to the impossibility of the developmental state model in Africa based on the past weaknesses of the continent may not be relevant today, because the developmental state will be built on 'trial and error' or 'learning-by-doing', rather than on the adoption of a complete institutional framework without any challenges. This was certainly true for the East Asian developmental states that, during the course of their development processes, continuously adjusted and reformed their institutions. State institutions can be flexible and cope effectively with the changing requirements to remain competitive and sustain long-term economic and human development (Chang, 1994; 2002). Historically, these states do not have everything right from the outset but have learnt by doing and have been willing to make radical changes in the development process (Chang, 2007).

The proponents of a developmental state option have promoted the role of competent state intervention with effective institutions and state bureaucracy to design and implement pro-poor and pro-development policies and strategies. "They have concluded that not only can African countries draw broad lessons from the East

Asian experience but they also currently possess sufficient ingredients to address their development challenges by adopting developmental-state 'approaches' (UNCTAD, 2007:75). They argued that there is no adequate reason to prevent Africa from adopting the developmental state paradigm, despite multi-dimensional capacity weakness being a major source of the continent's current underdevelopment. In fact, the developmental state would be able to target and systematically address many of these capacities, institutions and other related constraints. Indeed, the developmental state in Africa could lead to a renaissance in terms of socio-economic development more effectively than the neoliberal alternatives (Mkandawire, 2001).

Accordingly, Mkandawire (2001; 2010), Evans (2008; 2010), Fritz & Menocal (2007), Edigheji (2010) and UNECA (2011) are among the proponents of the developmental state in Africa. Mkandawire (2001), in 'Thinking about developmental states in Africa', sought to clarify the characteristics of the developmental state and consider its possibility in SSA. He stressed the importance of the social-engineering process that created the developmental state and dispelled attacks by neoclassical theorists. Furthermore, he presented a convincing argument not only about the possibility of the East Asian type of developmental state (which was authoritarian) but also about the prospect of a 'democratic developmental state' in Africa. African countries should borrow, he argued, some of the good experiences from the Asian Tigers and try to adapt them to their unique conditions (Mkandawire, 2001).

The proponents of the idea of the developmental state in Africa believe that promoting the idea of a developmental state in Africa is essential to overcome many of the development challenges. For instance, Botswana and Mauritius have confirmed the possibility of not only a conventional developmental state but also a 'democratic developmental state' in the SSA region in the twentieth century. The recent discourse is concerned with how certain aspects of the twentieth-century developmental state could apply today and what are necessary features need to consider. Peter Evans (2010), among others, is optimistic about the possibility of a developmental state in the Global South but emphasises the importance of 'the strength of the state bureaucracy' (Evans, 2010). However, the proponents of the developmental state paradigm have couched much of their analysis in terms of institutional capacity but many African countries have lack such capacity (Fine, 2011).

The construction of a developmental state requires commitment from every sector but, more importantly, from political leaders and state institutions. This is because policy-makers and executives are generally organised under state institutions in different structures of government. In East Asia, once the government said it was going to do something, it did it. Thus, nations in the SSA countries who build developmental states would expect their governments to introduce strategies to attract and retain high-quality staff for public service (Huff et al., 2001) and implement what they promise, based on a deliberate participatory approach.

To summarise, the possibilities of developmental states in Africa have become a subject of interest to scholars, development practitioners, international institutions, and African decision-makers alike. Almost all



scholars agreed that market-dominated capitalism (i.e. neoliberalism) does not fit in Africa, and that socialism (planned economy) is almost out-dated. The developmental state paradigm could be a middle path, combining significant state intervention in the economy with market forces (Edigheji, 2005; Edigheji, 2010; Meyns & Musamba, 2010; UNECA, 2011; Routley, 2014). Africa has registered remarkable progress in both political and economic governance and institution building since the turn of the new millennium. However, the image of Africa remains mixed with pockets of development and governance progress. Further efforts should require making the continent the future global economic powerhouse. To realise this, claiming a context-specific developmental state model rather than making marginal adjustments to the existing neoliberal paradigm to overcome the existing development constraints would be indispensable.

One of the crucial aspects that would strengthen the developmental state in Africa is investing in human capabilities, which is the engine of the overall development process. As Evans (2010) states, unlike the twentieth century developmental state that focused on manufacturing, the twenty-first century developmental state will focus on a knowledge-based economy. This means concentrating on the development of human capabilities – their strategic orientation should be people-centred and people-driven development to boost capacity to mobilise the people around the development projects. Far-reaching and well-functioning institutions will be required and this would involve increasing investment in human capital<sup>20</sup>, based on pragmatic social-sector programmes. Implementing pragmatic social-sector policies and strategies would help to promote economic diversification, new value chains in the economy, increased capability and massive labour absorption, encouraging labour-intensive economic activities and a productive capital-intensive manufacturing sector (Swilling & Annecke, 2012). Therefore, the developmental state ideology is not merely a simple recipe for the successful advancements of a nation it is an ideology that puts development agenda at forefront. The developmental state ideology is not a dogma but a means to accelerate the development process in developing countries through active state intervention.

### ***2.4.3 The developmental state and institutions in Africa***

The last few decades have witnessed spirited debate over the role of institutions in fostering and frustrating the development process. The debate appeared to be polarised between the orthodox, NIEs, and a variety of heterodox analysts associated with the IPEs approach. The former focuses on the free-market camp enabling institutions in a ‘one-size-fits-all’ approach, and the latter argues that enabling institutional development from a context-specific perspective may influence the performance of economic development. The importance of institutions for the developmental state has received much attention since the 1990s, and the consensus is that institutions matter in economic performance is no longer controversial. In addition,

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<sup>20</sup> The developmental state of the twenty-first century will be oriented around the knowledge economy as opposed to manufacturing, with broader participation and rewards than those confined to an industrialising elite coordinated by a state bureaucracy (Evans, 2008).



cross-sectional variations in economic growth performance have been shaped by the presence (or absence) of well-articulated institutions (Chang, 2002; Kiiza, 2006). Development planners and decision-makers should be aware of the importance of organisations and the potential usefulness of building context-specific, well-functioning, and effective institutions. These are not acquired through the wholesale importation of ‘best-practice’ institutions, as is evident from the effectiveness of the home-grown developmental states in East Asia (Johnson, 1982).

Building the institutional arrangements is process of ‘trial and error,’ and the institutional arrangements must evolve over time to respond to changing conditions. Such institutions affect the state’s capacity to define and implement its developmental programmes in a legitimate and credible fashion to achieve the development goals at different levels (Edigheji, 2010; Evans, 2010). The institutionalisation of the developmental state has received much attention in recent times to strengthen the development process. However, the leadership capabilities to build effective institutions and networks of institutions are the main challenge, especially in the developing countries that wish to adopt the developmental state model.

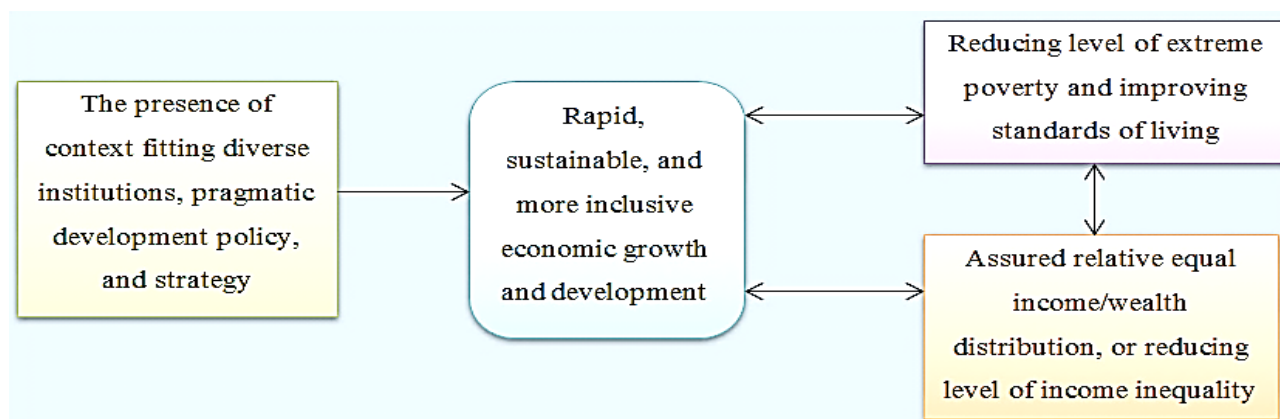
Developing countries face two fundamental challenges. First, ‘the challenge of achieving rapid and sustainable development’ and, second ‘the demand to have a greater voice and participation by all citizens in the process of decision making at different levels’ (Leftwich, 2005b). These challenges are complex because the institutional requirements to accelerate the development process are structurally different (Leftwich, 2005b). Developmental state institutions should be context specific but share common characteristics that explain their superior economic performance. ‘Getting institutions wrong’ would result in failure of development practices and establishing the right institutions will enhance the capacity of the developmental state to promote its development efforts.

Institutions interact with one another through broad and overarching sets of processes in which the state and economic and societal actors interact to make decisions. Institutions shape but do not determine human behaviour in economic, social and political life, so vibrant and context-specific institutions are crucial to address these issues in a proper and sustainable manner (Chang & Evans, 2005; Leftwich, 2005b). However, institutional contexts vary from society to society and the same developmental policies and strategies may not have the same outcomes in all societies. Institutions may promote or hinder development process depending on their type and their operation. The state should recognise that there are ranges of different institutions, such as social (governing social interaction and behaviour), economic (the rules and procedures governing economic behaviour) and political (governing the relations of power and decision-making), which often overlap and sometimes conflict to produce unintended or undesired outcomes. It is the manner of their interaction that so decisive in shaping the political economy of a country that in the creation and distribution of resources within the existing context and resource endowments (Leftwich, 2005b). Essentially, these institutions govern, express and sustain relations of power in the economy, as well as have a powerful effect on human behaviour and on the political economy of the nation; they are not easy to change in favour of individual interests.

Developmental state must do two things when building institutions: (1) ‘develop a more adequate vision of how institutions shape economic behaviour and outcomes’, and (2) ‘create a more systematic and general understanding of how institutions themselves are formed and change over time related to overall change in the economy’ (Chang & Evans, 2005). To realise this, it is better to focus on institutions as key instruments, which enable the achievement of goals that require more coordination than individual rationality or rules of the game. It is better to understand them as constitutive of the interests and worldviews of economic actors and, therefore, institutions and economic actors are mutually constitutive (Chang & Evans, 2005). Institutional capacity building in the developmental state proceeds in parallel with political interventions aimed at restructuring the distribution of political and organisational power with a view to encouraging the construction of productive coalitions to support the economic transformation process. High-quality institutions are associated with higher average growth rates and lower levels of inequality. Strong social cohesion/s (broad-based, state–society coalitions) produces better institutions and these, in turn, lead to higher level of growth and a faire distribution of economic resources (see Figure 2.1).

The four dragons of the East Asian developmental states managed to achieve successful economic development by establishing workable institutions that enabled them to implement effective and coherent development strategies within a generation. By contrast, institutions have played a minor role in economic development in many African countries because there is an over-concentration of political power in the hands of political elites, and institutions are weak and non-context specific. In Africa, lack of effective institutions and committed political leadership, and an inability to enforce rules and regulations, often leads to corruption/or mismanagement of resources, which affects the overall development process. These institutional differences (in both formulation and capability) between East Asia and Africa, which arise from divergent ideologies, have resulted in significant differences in their economic development status. Therefore, the political elites of the emerging developmental states in Africa should draw lessons from East Asia and commit themselves to building well-functioning institutions by either modifying the existing ones or by creating new ones.

**Figure 2.1: The role of institutions, development policy and strategies for developmental state**



Source: Author's own drawing

It requires political commitment, stability and a continuity of development policies and strategies to achieve broad-based (inclusive) and sustainable development. Hence, building a developmental state in a participatory democratic approach is appropriate to overcome the wide range of challenges by creating an opportunity for broad-based and sustainable development (Chang, 2002; 2003a; Huyen, 2004). Visionary, committed and patriotic leadership and competent state institutions are indispensable for the effective functioning of the developmental states in a democratic approach (UNECA, 2011). In a region with diverse ethnic and cultural groups, stability will continue to be paramount in building effective developmental states via accommodating and empowering the vital interests of different stakeholders (Balema, 2014).

The emergence of more accountable governments and the introduction of more sensible development policies will be essential to ensure socio-economic and political justice (Radelet, 2010). Accordingly, Mkandawire discourages those who are proponents of authoritarian regimes (influenced by most of the East Asian developmental states) and who believe this is the only way in which developmental states can function cohesively (Mkandawire, 2010). There has been vigorous debate about whether authoritarian or democratic governments have been associated with strong economic performance in developing countries over the last decades. Overall, the relationship is mixed but in Africa, democratic governments like Botswana and Mauritius have been successful, while many of the authoritarian governments have failed (Radelet, 2010). In practice, for a state to become developmental it does not necessarily need to become authoritarian (Mkandawire, 2010). Nationalism can drive development and other social goals within a developmental state while giving an opportunity to all stakeholders to participate in the development process in inclusive approach. The deep sense of crisis and embarrassment in many African countries in the past has provided a new motivation for national development (Mkandawire, 2001).

To sum up, nurturing diverse institutions and building institutional capacities in the economy is socially engineered and required commitment from all stakeholders in the society. To build institutions, African developmental states need to consider the following points: first, they should avoid past institutions that are completely incompatible with the current situation; second, they need to improve some of the existing institutions to make them compatible with the current situation; and third, they must nurture new institutions based on their own context. Institutions are not rigid or static once they are established – they are dynamic and flexible, and change in accordance with the political and economic dynamism of global and local conditions. It is vital that African countries to recognise and understand the role of diverse institutions in fostering economic growth and development because institutions are on the increase and the development challenges are daunting. The current literature shows that the structure of social, political, and economic institutions influences economic growth and development processes. African states should, therefore, adopt a suitable development ideology, such as the developmental state, elaborate their development agendas, and implement these to satisfy the needs of the masses. Political legitimacy should be derived from running a successful economic process without suppressing the freedom of the nation. Hopefully, the new African developmental state will present a solid base for social engagement in economic transformation,

strengthening the demands for a new and equitable national and international order. To realise this, a developmental state model requires strong political will and commitment, a long-term vision, a broad-based state—society coalition, and determination by political elites, and by the nation in general.

## 2.5 The groundwater irrigation economy

### 2.5.1 *The groundwater-based irrigation development and practice*

As a production input in agriculture, irrigated water is an important socio-economic ‘good’ when it plays a positive role in improving the livelihood of the farm household and ‘bad’ when it has negative externalities (Hussain & Hanjra, 2004). Agriculture is by far the largest user of water resource, accounting for about 70% or more of the total water used globally (Turner et al., 2004; Garces-Restrepo et al., 2007; Siebert et al., 2010). Similarly, 70% or more of all groundwater withdrawals are also used for irrigation purposes, particularly in arid or semi-arid regions of the world (Siebert et al., 2010; Shah, 2014). Irrigation plays a major role in boosting agricultural production (Huang et al., 2006; Zhou et al., 2009).

However, the adoption of irrigation technology is both expensive and complex in terms of capital and institutional requirements. Investment in irrigation rose rapidly during the 1960s and 1970s because of high agricultural output prices, which seemed to guarantee a high rate of return on this investment. More than 60% of the world’s irrigated plots are found in Asia – from the early 1960s to the end of the twentieth century, the number of irrigated plots was doubled. Technological advancements helped to facilitate this expansion of irrigation infrastructure. Irrigation development can be divided into two stages: first, ‘the development of surface water irrigation systems, largely through public investment’ and, second, ‘the exploitation of groundwater irrigation initially through public investment and subsequently largely through private investment’ (Barker & Molle, 2004).

Since the 1950s, the use of groundwater irrigation for agriculture has grown significantly in many arid, semi-arid and even humid regions of the world. While groundwater use for agriculture is growing globally, the extent and pace of growth differs, with different implications for resource productivity and governance regimes. Groundwater irrigation has grown and changed in keeping with the changing socio-ecology<sup>21</sup> (Shah, 2014). It is more productive than other types of irrigation and it offers reliable water resources that can contribute significantly to offsetting the effects of climate change. In addition, it is generally less prone to pollution than surface-water irrigation (Siebert et al., 2010). Groundwater has been at the heart of the ‘green revolution’ in agriculture across many Asian nations because it has permitted cultivation of high-value crops in arid regions, thus having a significant impact on the livelihood of smallholder farmers (Shah, 2007).

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<sup>21</sup> There are four common groundwater socio-ecologies, such as ‘arid agrarian systems’, ‘industrial agricultural systems’, ‘smallholder intensive-farming systems’ and ‘groundwater-supported, extensive agro-pastoralism systems’. These differ in hydro-climatic and demographic characteristics: land-use patterns, the organisation of agriculture and the relative importance of irrigated and rain-fed farming (cf. Shah, 2014).

Groundwater irrigation, together with modern agricultural inputs, such as high-yielding variety (HYV) seeds, fertilisers, chemicals, and other agricultural inputs is associated with better yields. This is because it offers better control over water availability and reduces the risks and variations in production during periods of drought and unpredictable rainfall (Gandhi & Namboodiri, 2009). ‘Groundwater is typically the only perennial source of water supply in semi-arid areas and groundwater aquifers can continue to yield water during dry year even when surface water bodies dry up. With expected changes in rainfall patterns due to climate change, groundwater offers a more reliable source of water than surface water bodies, assuming proper management’ (Allaire, 2008:3).

The emergence of groundwater-based irrigation over the past century has proceeded in three waves. The first wave was in Italy, Mexico, Spain and the United States, where large-scale groundwater use began in the early 1900s, but this seems to have peaked or stopped growing. The second wave began during the 1970s in South Asia, in parts of the North China plains, the Middle East and North Africa. It also occurred in some South Asian and Southeast Asian countries such as Sri Lanka and Vietnam (Barker & Molle, 2002; Giordano, 2006). The third wave of growth in groundwater use is likely to occur in regions of Africa, although there are likely to be challenges due to drought and a lack of rainfall to restore the groundwater supplies. Supply-side factors, such as government subsidies for pumps and electricity, have helped to promote intensive groundwater irrigation utilisation. Governments have facilitated the development of groundwater irrigation by providing subsidies for pump sets and energy, as well as credit support to beneficiary farmers (Sekhri, 2011).

For instance, in the early 1980s, irrigation investment peaked at 60% of the total agricultural expenditure in the Philippines, and more than 50% in Sri Lanka. In Vietnam during the 1990s, slightly more than half of public agricultural expenditure was still devoted to irrigation (Barker et al., 2004). The government of Taiwan has also been subsidising the irrigation sector: between 1993 and 1997, government subsidies accounted for almost 70% of the total expenditure of the irrigation associations (Lam, 2006b). Besides these supply-push factors, the boom in groundwater irrigation is the result of a strong ‘demand-pull’ from farmers because of the significant value it offers for smallholder agriculture. Increasing population pressure on farmlands also pushed the use of irrigation technology as a value-add to stabilise production, encourage diversification and intensive farming practices. The added-value comes from its ‘stabilising effect,’ its ‘intensification effect,’ and its ‘diversification effect’<sup>22</sup> (Shah, 2014). Groundwater irrigation is generally associated with cultivating high-value market crops; for instance, in China, a large-scale survey of farmers found that it resulted in the cultivation of cash crops, accounting for 70% of the cotton crop, 62% of the oil-seeds crop and 67% of the vegetables (Wang et al., 2009).

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<sup>22</sup> The stabilising effect is groundwater is buffering role during droughts and dry spells when surface supplies run dry. The intensification effect, important in smallholder farming systems in Asia and sub-Saharan Africa, refers to the capacity of groundwater users to intensify land use by cultivating two, three, or more crops each year. The diversification effect refers to smallholders being able to access high-value markets or export crops that require year-round water control, which groundwater wells offer (cf. Shah, 2014:18).

Most of the irrigated land found in developing countries is the result of public investments and public operating subsidies to improve the livelihood of the farming households, in particular, and to transform the agricultural sector in general. Irrigation benefits the poor farming households by ‘lowering their risk of crop failure’, creating ‘higher, all-year-round farm employment’ and ‘increasing their yield’. It enables smallholder farmers to adopt diverse cropping patterns and to switch from ‘low-value’ subsistence production to ‘high-value’ market-oriented production. Increased agricultural production makes food more available and affordable for the poor landless households, who are the main beneficiaries of reduced food prices (Hussain & Hanjra, 2004). When considering investing in irrigation systems, particularly groundwater irrigation, farmers should consider factors such as ‘the availability of water’, ‘the depth from which the water must be pumped’, ‘financing’, ‘energy sources and energy prices’, ‘crop patterns’, ‘labour availability’, and ‘input and output prices or markets’ (Amosson et al., 2001).

The expansion and importance of groundwater irrigation varies across continents, regions, sub-regions, countries and agro-ecological regions within a country based on their endowments and capacity to utilise resources. The availability of groundwater is determined mainly by aquifer and climate conditions and groundwater irrigation is often found in regions where conditions are favourable and where groundwater recharge compensates groundwater extraction (Siebert et al., 2010). As Table 2.1 indicates, the global cultivated area under irrigation is estimated to be about 301million hectares (Mha), 38% of which is groundwater irrigation. The nations with the largest equipped areas groundwater irrigation are India (39Mha) and China (19Mha). In contrast, only a small proportion of SSA agricultural land is equipped for irrigated cropping, and groundwater extraction for irrigation is extremely limited (Siebert et al., 2010).

**Table 2.1: Area equipped for irrigation (AEI) and actual area irrigated (AAI)**

| <b>Continent/<br/>region</b> | <b>AEI-TOT<br/>(000 ha)</b> | <b>AEI-GW<br/>(000 ha)</b> | <b>AEI-GW<br/>(%)</b> | <b>AAI-TOT<br/>(000 ha)</b> | <b>AAI-GW<br/>(000 ha)</b> | <b>AAI-GW (%)</b> |
|------------------------------|-----------------------------|----------------------------|-----------------------|-----------------------------|----------------------------|-------------------|
| Africa                       | 13 576                      | 2 506                      | 18.5                  | 11 527                      | 2 157                      | 2.3               |
| North Africa                 | 6 377                       | 2 092                      | 32.8                  | 6 017                       | 1 817                      | -                 |
| SSA                          | 7 198                       | 413                        | 5.7                   | 5 510                       | 340                        | -                 |
| America                      | 48 903                      | 21 548                     | 44.1                  | 39 566                      | 17 621                     | 19.3              |
| Asia                         | 211 796                     | 80 582                     | 38.0                  | 185 139                     | 72 531                     | 70.8              |
| East Asia                    | 67 625                      | 19 330                     | 28.6                  | 58 263                      | 16 351                     | -                 |
| South Asia                   | 85 106                      | 48 293                     | 56.7                  | 77 968                      | 45 381                     | -                 |
| Europe                       | 22 651                      | 7 349                      | 32.4                  | 13 301                      | 4 816                      | 6.6               |
| Oceania                      | 3 967                       | 949                        | 23.9                  | 3 054                       | 693                        | 0.8               |
| Total (World)                | 300 895                     | 112 936                    | 37.5                  | 252 579                     | 97 821                     | 100               |

Source: Adapted from Siebert et al., 2010



Irrigation development can create a positive economic environment regardless of its negative impact on the ecology, point and non-point pollution. These benefits include crop intensification and diversification; increased productivity and production; the creation of seasonal employment opportunities which improves beneficiary income and expenditures patterns; enhanced food security and an increase in the supply of agricultural outputs (Lipton et al., 2003; Hussain & Hanjra, 2004; Hussain, 2007; Zhou et al., 2009). Asian countries have had a more successful history of using groundwater irrigation than other less developed countries, in particular the SSA. In Asia, for instance, between 1970 and 1995, cereal production more than doubled from 300 million tonnes to 650 million tonnes (Hussain & Hanjra, 2004). This remarkable growth production was largely due to irrigated agriculture, coupled with the use of HYV seeds, fertilisers and chemicals. Nearly 40% of the cropland in Asia is under irrigation, which accounts for about 70% of the total cereal production (Shah, 2007; Siebert et al., 2010). Unfortunately, this is not the case in SSA and the region remains vulnerable to frequent drought, even though they are potential water resources for irrigation.

### ***2.5.2 The groundwater irrigation situation in sub-Saharan Africa***

Agricultural growth is the key to the development of the rural economy and it could make an important contribution to reducing poverty and eradicating hunger in Africa (You et al., 2010). The development of irrigation is an important basis for agricultural development across the continent. Most farmers in the region practice rain-fed agriculture and agricultural productivity is the lowest in the world, partly because of the underuse of irrigation (You et al., 2010), despite being well endowed with water resources for this purpose. SSA faces far less pressure on water resources from population growth than Asia. The Asian experience has some potentially important lessons for SSA, where food and water security are becoming increasingly interconnected with the growth of irrigation. In Africa, the achievement of food security would mean massive job creation, improved livelihoods in the agricultural sector and overall broad-based growth through forward and backward linkages in the economy (Global Water Partnership, 2013).

In the SSA region, 60% of the population is directly dependent on the agricultural sector for their livelihood. There is more than 197million hectare (Mha) of land under agriculture, which is the largest industry in many countries in the region (You et al., 2010). About 7Mha are irrigated, which is just 6% of the total cultivated area, compared to 38% in Asia (Siebert et al., 2010), 14% in Latin America and a global average of about 18% (You et al., 2010). Two-thirds of this irrigated land is situated in three countries: Madagascar, South Africa and Sudan. Therefore, food production in the region is almost entirely rain-fed. However, irrigation is important to help farmers cope with seasonal droughts (i.e. when farmers have irrigation infrastructure they tolerate the impact of drought) and it plays an integral role in the transition from subsistence to commercial farming. The Southern Africa sub-region, led by South Africa, draws on about 6% of the total renewable water resources for agriculture (You et al., 2010:3). Agriculture is the biggest consumer of water in South Africa, but De Lange indicates that agriculture's share of the usable supply has decreased from approximately 70% in the 1960s to roughly 60% in 2013 (De Lange, 2016:248). This difference is due to the



fact that the former focused on only renewable water resources while the later indicated all types of water resources.

Many of the SSA countries do not have ‘physical water scarcity’ (although it is unevenly distributed across the region), but they are confronted with ‘economic water scarcity’, i.e. a lack of capital and technology (skill) to convert the water resource for economic benefit. Economic water scarcity happens when physical water resources are available, but there is a lack of economic resources and incentives to convert the water resources into economic benefit (Van Koppen, 2003; Svendsen et al., 2009). For instance, groundwater development in the region is hindered by the relatively high cost of well construction compared to India and China. While pump manufacturing facilities and well-construction companies grew rapidly in China and India during the 1970s and 1980s, this has not occurred in SSA. Investment costs in irrigation development are relatively high because of a shortage of competitive private companies in the region providing well construction, pump supply and pump maintenance services (World Bank, 2008).

This indicates that a shortage of capital (technology), financial and human capacity (skills), and institutions are the largest constraints faced by poor farmers in the region in accessing new irrigation technologies (Svendsen et al., 2009). Farmers must draw from their own savings (if they have any), borrow from family or private money lenders, use remittances or sales from farm proceeds, obtain loans from formal credit institutions, or benefit from different subsidies or donation packages (Abric et al., 2011). Subsidies used for pumps, well digging, fertilisers, energy and other inputs (Abric et al., 2011). For instance, direct grants or subsidies for deep-well, groundwater irrigation development for smallholder farmers have been implemented in the Raya Valley in Ethiopia (Gebregziabher et al., 2013) and for shallow wells in Nigeria (Abric et al., 2011). It is estimated that the total investment costs of the *fadama* systems in Nigeria have been US\$ 1 650/ha (Abric et al., 2011), and US\$ 6 250/ha (including electric power, powerhouses and installation for drip and sprinkler systems) in the Raya Valley in Ethiopia (Gebregziabher et al., 2013). Furthermore, costs are elevated in the region due to corruption (i.e. deviations from policies and regulations, and organisational and institutional imperatives) in issuing drilling contracts and the inappropriate design of wells, etc. (World Bank, 2008).

Statistics on groundwater usage in SSA are sparse and incomplete. In recent years, there has been a growing trend in many countries to establish groundwater infrastructure for irrigation purposes at both subsistence and commercial scales to increase the food supply and tackle poverty (Tuinhof et al., 2011). Groundwater resource development remains generally low (except in localised areas of southern Africa and around some of the major cities for potable water). However, there is excessive resource exploitation for commercial agriculture in some regions, even though groundwater resources for irrigation are not significant. For instance, the Kajiado district of Kenya (immediately south of Nairobi), the Limpopo Basin karst aquifers of South Africa, and similar limestone aquifers in Zambia, Zimbabwe and Namibia, all suffer from shortages of groundwater resources due to over exploitation and a lack of rainfall to restore groundwater potential. Thus, effective planning and sustainable implementation of groundwater resource development should be

prioritised to meet the critical social welfare targets and livelihood opportunities by augmenting investment in infrastructure (Tuinhof et al., 2011).

It is important to increasing the use of groundwater resources for irrigation purposes to accelerate the growth of the agricultural sector, especially in arid and semi-arid areas. There are two mechanisms for doing this: first, '[e]xtensive groundwater use for small-scale irrigation on village communal land and by smallholders (using low cost water wells) for horticulture and drought proofing staple crop production'; second, '[m]uch intensive use of groundwater irrigation to produce cash crops for national and international markets' (Tuinhof et al., 2011). Only a small proportion of agricultural land of the region is equipped for irrigated cropping, and groundwater use for irrigation is extremely limited (Siebert et al., 2010). However, a recent assessment of the SSA region indicates that the total figure for groundwater irrigated area increased to 1248Mha, representing 20% of the total irrigated area in the region (Villholth, 2013). This is significantly higher than earlier estimates of 0.4Mha, about 6% of the total irrigated area (Siebert et al., 2010).

'Groundwater is accessed through diverse schemes, varying by scale, funding source, ownership of land and resources, type and depth of groundwater utilized, crops grown, degree of market orientation and systems used to extract the groundwater' (Villholth, 2013:375). Table 2.2 shows that '[a] simple typology that encompasses the most prominent forms of GWI in SSA, which distinguishes between two overall parameters: depth of the groundwater utilized and funding source' (Villholth, 2013:375). The deeper systems tend to provide more secure and perennial water availability, but these require larger initial investments, higher maintenance and operational costs, and farmer organisation to deal with water sharing and maximising the benefits from the infrastructure. The public sector also tends to have better control of implementation, farmer training, monitoring of deep-well systems, and strengthening institutional arrangements, both at scheme and community levels (Villholth, 2013).

**Table 2.2: Typology of groundwater irrigation in SSA**

| Funding sources                                      | Depth of wells                                                                                                                 |                                                                                                |
|------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------|
|                                                      | Deep (greater than 20 m)                                                                                                       | Shallow (less than 20 m)                                                                       |
| Private (farmers themselves)                         | Commercial, large-scale, mechanised, export oriented<br>Examples: flower-farms in Ethiopia, centre-pivot grain farms in Zambia | Informal, small-scale, farmer-driven<br>Examples: vegetable growing schemes in northeast Ghana |
| Public (public sector, NGOs or international donors) | Deep-well systems, subsidised<br>Examples: public schemes in Raya Valley groundwater irrigation in Ethiopia                    | Shallow-well systems, subsidised<br>Examples: <i>fadama</i> systems in Nigeria                 |

Source: Adapted from Villholth (2013)

In general, understanding the potential and role of groundwater irrigation for poverty alleviation and food security achievement in SSA is increasing rapidly due to recent public- and private-sector investments at

different scales. Various development irrigation models, ranging from community-based, deep well, groundwater schemes to individualistic, shallow groundwater schemes have been implemented so far. In the SSA region, groundwater resources are still abundant in many areas but the development of these resources requires financial and human resources, as well as institutional capacities to extract these resources sustainably to meet the needs of both the present and future generations. Diverse and effective, context-specific institutions at different levels are crucial to use the existing water resources sustainably (both economically and ecologically) for irrigation to eradicate poverty from the region, like the South and Southeast Asian countries did. Without the proper institutions, finance and skill developments, common-pool resources like irrigation will either underprovide or be overused. ‘Common-pool resources are natural or man-made resources shared among different users, a condition that produces a competition for their utilization leading often (although not necessarily) to their degradation or even to their destruction’ (Bravo & Marelli, 2008:1). Therefore, the institutional aspects (the software vis-à-vis physical infrastructure) should give the same emphasis as installing the irrigation infrastructure (the hardware).

### ***2.5.3 Economic importance of groundwater irrigation development***

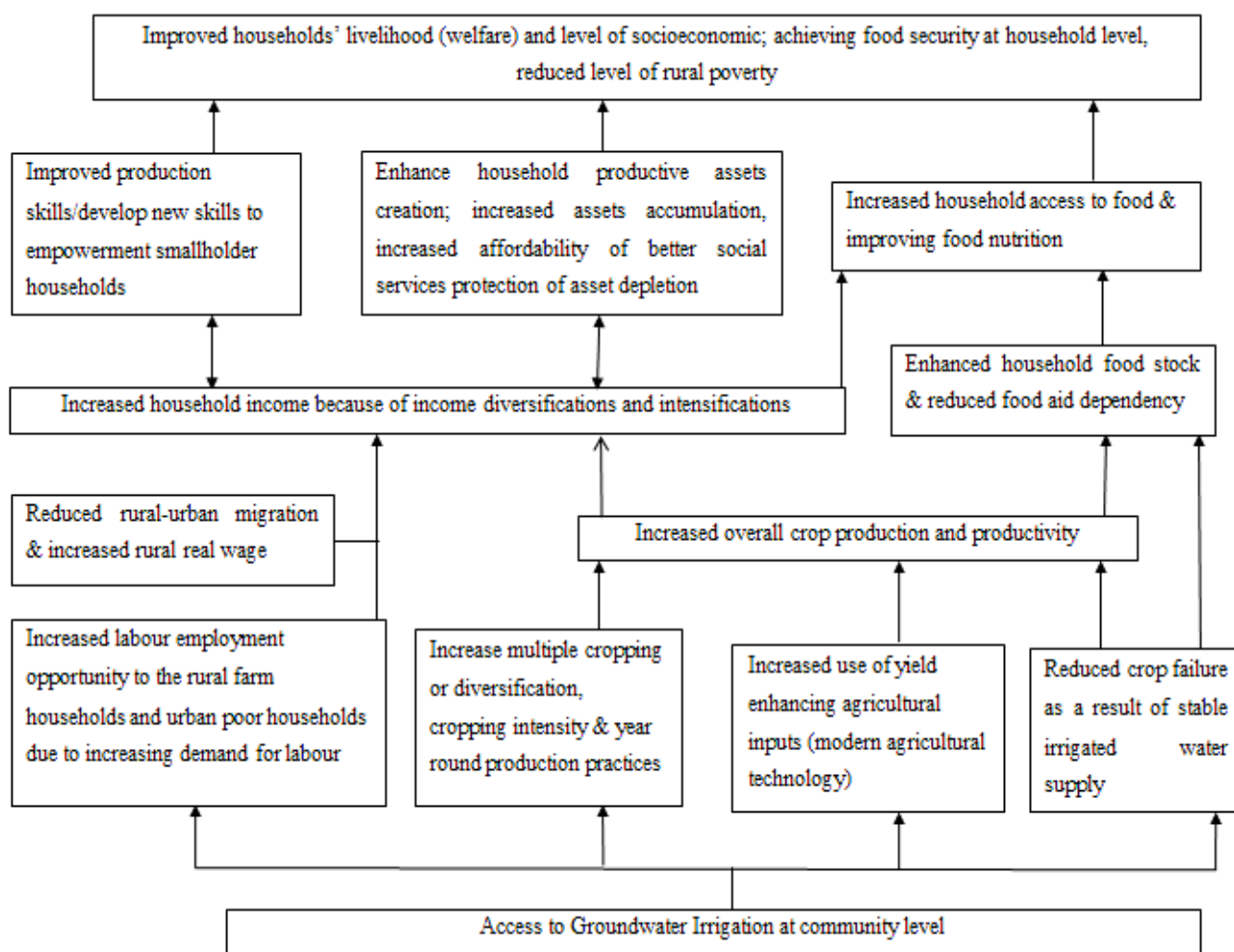
Irrigated water will remain one of the critical agricultural technologies/inputs that help to increase the supply of high quality agricultural outputs by increasing productivity and creating a surplus for the markets, thus increasing household income and improving the livelihoods of the farming households. Access to reliable and adequate irrigation increases employment opportunities in the rural economies (because irrigated farming is labour-intensive) and helps to diversify their income base (Kumar, 2003; Hussain & Hanjra, 2004; Svendsen & Turrall, 2007). Similarly, access to irrigation enables farmers to adopt new agricultural technologies that help to increase their productivity. There are three possible reasons for increased output: (1) ‘Irrigation improves yields through reduced crop loss due to erratic, unreliable, or insufficient rainwater supply’. (2) ‘Irrigation allows for the possibility of multiple cropping and to an increase in annual output’. (3) ‘Irrigation allows a greater area of land to be used for cropping in areas where rain-fed production is impossible or marginal’ (Lipton et al., 2003; Schoengold & Zilberman, 2007).

The expansion of irrigation results in more intensified agricultural land use and groundwater-based irrigation is better than surface irrigation for this purpose. Numerous studies indicate that farmers favour groundwater irrigation because the resource is always available and they have autonomy over its control (i.e. it does not have head and tail conflict like in canal irrigation). This lowers the risk of investment in other inputs (HYV seeds, fertilisers and energy), which in turn leads to intensification, diversification, higher and more stable outputs, and higher net incomes compared to rain-fed or surface water irrigation systems (Shah et al., 2013). Smallholder groundwater irrigation may well be a suitable and socio-economically acceptable alternative and supplement to surface water irrigation and rain-fed agriculture practices (Villholth, 2013).

For instance, in Indian districts after the 1970s, the increase in groundwater-irrigated areas has been so large that it contributed too much higher output per hectare than surface-water irrigation. Groundwater irrigation

played a large role in strengthening rural livelihood and alleviating poverty on the Asian continent between the 1960s and 1970s related to their ‘green revolution’ programme. This region has almost achieved food security at both household and national levels. This ‘green revolution’ programme in the agricultural sector has done more to alleviate rural poverty than most of the public intervention programmes that were expressly designed for this purpose. In scale and depth, its socio-economic impact is comparable to some of the world’s most successful development programmes (Shah, 2007). For instance, China has been able to feed 21% of the world’s population with only 9% of the world’s arable land and 6% of its freshwater. It has lifted hundreds of millions out of poverty, while maintaining some of the highest rates of economic growth in the world (Doczi et al., 2014). Its total irrigated area increased by over 30% and its per capita grain yields increased by over 10%, resulting in an increase in total yearly grain production from 446 to 590 million tonnes (World Bank, 2014a). Much of its 30% growth in total irrigated area came from regions that previously relied on less productive rain-fed agriculture. Thus, the percentage of irrigated land in China’s rose by about 3%, from 10% of the total in 1990 to 13% in 2012 (Doczi et al., 2014). Figure 2.2 illustrates how investment in groundwater irrigation is beneficial for the rural farming households.

**Figure 2.2: Impact of groundwater irrigation investment on poverty**



Source: Adapted from Tesfay (2008)

#### ***2.5.4 Groundwater irrigation sustainability and management***

Water is a particularly difficult natural resource to manage compared to others natural resources (such as forests or soils) so the need to address issues of water governance has increased. To improve water governance one must understand the main players and various factors involved (Global Water Partnership, 2013). Irrigation systems are complex and involve numerous decisions and actions of actors with different capacities in different situations. A good irrigation system involves irrigation resource users (farmers) and irrigation managers (service providers and controllers) and is characterised by a well-maintained infrastructure. Irrigation management has related to the broader issues of water-resource management and economic development (Lam, 2006b).

In the 1980s, the focus on irrigation governance shifted to the irrigation management transfer or participatory irrigation management approach. This approach involved farmers at the grassroots level, starting from project design and initial investment right up to the maintenance and operating schedules. The past three decades have thus seen the spread of WUAs and other farmers' organisations such as irrigation boards and cooperatives, which are supposed to play active roles in maintenance and operations, and management of irrigation schemes (Garces-Restrepo et al., 2007; Xie, 2007; Kadigi et al., 2013). Different countries have developed their own WUAs and irrigation management transfer or participatory irrigation management approaches based on their specific cultural, political, institutional, economic, and climatic conditions (Xie, 2007). Although in theory WUAs sound great, the outcome in practice remains mixed, resulting from differences in implementation (Kadigi et al., 2013).

Irrigation management is moving towards joint management and partnership between governments and farmers, and their water groups/associations. It is crucial to involve farmers in irrigation management, giving them a voice in decision-making regarding water distribution, systems operations and maintenance, to develop co-ownership or a sense of ownership of the resource and/or the irrigation infrastructure (Xie, 2007). Experience with farmer irrigation management indicates that for successful community management, irrigation has to be central to the improvement of livelihoods and this result in low economic and financial costs, and low transaction costs of the organisation. Developing local leadership skills, context-specific institutions and the awareness of the community are critical for the success of this management approach (Gebremedhin & Peden, 2002; Xie, 2007). In turn, this participatory approach is crucial to boost the awareness of the community about the impact (economic and environmental) of the overexploitation of water resources. Engineering infrastructure alone does not bring about better irrigation performance – although it obviously plays an important role in the efficient extraction of water. It is more useful to examine how improved engineering infrastructure configures with other factors to affect irrigation performance, and to identify the conditions under which improved engineering infrastructure can make a difference in irrigation performance (Lam & Ostrom, 2010). Water adequacy and reliability are determined by not only the physical setting and engineering infrastructure, but also by the effectiveness of institutions to manage the resource in a sustainable and efficient manner.

Sustainable management of groundwater resources is essential to avoid aquifer depletion, which would cause declining agricultural output, and reduces the harmful environmental consequences (Shah, 2007; 2014; Allaire, 2008). Sustainability is considered in terms of space, time, scientific status, available technology and social development. Nevertheless, traditionally groundwater irrigation development has been associated with terms such as ‘safe or perennial yield’ without integrated groundwater resource management plans. This concept of ‘safe yield extraction’ must be changed to a ‘sustainability’ approach through integrated water-resource management practices (Alley & Leake, 2004). Unregulated groundwater extraction can cause water tables to fall to levels that require significant time to recharge. India is a prime example of this (Shah, 2007; 2014; Allaire, 2008).

In most cases, the issues of groundwater management and sustainability were neglected because of an apparent abundance of the resource – priority was given to its extraction and utilisation. For instance, this serious overexploitation of groundwater resources occurred on the Asian continent. Although several direct and indirect management strategies have been put in place to address this issue over the last three decades, pragmatic and viable solutions have not yet been proven (Qureshi et al., 2009; Shah, 2014). Instruments that have been used in an attempt to influence behaviour of users to maximise the benefit of groundwater irrigation resource include ‘administrative regulation’, ‘economic instruments’, ‘water-saving technologies’, ‘entitlements’, ‘community aquifer management’, ‘supply augmentation’, ‘conjunctive use of resource management’, ‘energy pricing and rationing’ and ‘a land-use management system’ (Shah, 2014).

The major barriers that prevent transition from the groundwater irrigation expansion to the management mode are a lack of information and non-existence of proper institutions. For instance, information related to groundwater availability, quality, withdrawal and other variables are limited or non-existent (Qureshi et al., 2003). Data about available resources, and who draws how much and when, are crucial for managing the resource. To fill this gap and address the sustainability issue necessitates institutions at different levels and different approaches to developing community awareness of the issues. Institutions will not be effective if the community is unawareness of the benefits and cost of unregulated extraction. Besides institutional barriers, government control of groundwater resource-use in countries of the Global South is often a two-edged sword: on one hand, it costs them many resources (which they often do not have or need for poverty alleviation programmes) and, on the other, doing so is often politically contested (Shah, 2007).

However, ‘[c]rafting institutions for governing irrigation systems is challenging and requires skills in understanding how rules produce incentives and outcomes when combined with specific physical, economic and cultural environments’ (Bravo & Marelli, 2008:7). Water-resource governance needs ‘the range of political, social, economic, and administrative systems to develop and manage water resources at different levels for different purposes’ (Rogers & Hall, 2003). There is no ‘one best way’ to organise and govern a country’s groundwater irrigation economy because of the combination of different resources, people, society, economy and polity that change across space and time (Shah, 2014). In addition, rules governing the supply and use of any physical system are devised, tried and modified over time. Hence, it is necessary to invest



considerable time and resources in learning more about how various institutional rules affect the users' behaviour at the grassroots level. When institutions are well designed, opportunism (i.e. free riding, rent-seeking and corruption) is substantially reduced (Ostrom, 1990; Bravo, 2008). Nevertheless, the choice and building of workable institutions are not an easy task and it demands strong commitment from both government and the society. The recent discourse regarding the solution to the problem of sustainable irrigation resource management and infrastructure is neither state nor market but somewhere in between, which requires the involvement of farmers in the decision-making process in all aspects. This indicates that the state needs to create a broad coalition of state–society institutions and involve the community in strengthening institutions.

For institutions to become effective in the long-run, the following points need to be taking into consideration. These are: 'continual assistance to improve the infrastructure', 'the existence of written rules' developed through the involvement of stakeholders approach, 'the imposition of fines and punishment', 'leadership commitment and consistency', and 'collective action for system operations and maintenance', which may have supported the sustainability of the intervention effects and irrigation performance (Lam & Ostrom, 2010). Development of adequate social capital, which suggests that inclusive state–society 'synergy', is instrumental in realising development potentials in the various domains of collective action (Evans, 1995). Research on East Asian irrigation management suggests that a 'synergy' between farmers and irrigation managers can help bring about good irrigation performance (Lam, 1996). The successful management of irrigation involves a co-production process in which there is complementarity between the efforts of irrigation managers and farmers (Lam, 1996). This co-production process can also create a sense of ownership or co-ownership of the irrigation infrastructure, which helps sustainability in the long-term.

Across Asia, there are two major models of institutional arrangements for managing irrigation infrastructure and resources.<sup>23</sup> Improving water management in Asian agriculture is essential to redress the growing water scarcity and improve water quality. This will require significant and complementary changes in policies, institutions and management techniques (Hazell, 2009).

In South Asian countries such as India, Sri Lanka, Bangladesh, and Nepal, a national irrigation department is in place to look after most, if not all, activities related to irrigation, including planning, construction, irrigation management, operation and management. The irrigation department usually highly centralised with a unified chain of commands stemming from the central government to field offices (Lam, 2006a:167–8).

In the South Asian case, the irrigation department is the institution that monopolises responsibilities and authority related to irrigation resource management. On the other hand:

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<sup>23</sup> Owing to historical and cultural differences, irrigation institutions have evolved and embarked on different trajectories of institutional development. For instance, while Taiwan and South Korea both adopt the parastatal type of irrigation institutions, in Taiwan these have been moving towards a more autonomous and self-governing mode, whereas in South Korea these have been subject to increasingly tight control by the central government (cf. Lam, 2006a).



In East Asian countries such as Japan, Korea, and Taiwan, a number of parastatal organisations are in place to operate and maintain irrigation systems located within one or more hydraulic regions. These parastatal organizations are legally formed and owned by farmers, own properties, and operate on an independent budget. Their structure and procedures, however, resemble a typical South Asian irrigation bureaucracy, and are subject to the supervision of governments at higher levels. These parastatal organizations often work closely with a large array of farmers' self-organizing institutions at the field level (Lam, 2006a:168).

A major feature of Taiwan's irrigation institutions is that they provide arenas and support for problem solving by farmers at the local level. Farmers belong to self-organised irrigation groups or WUAs, which are responsible for operation and maintenance. The major lesson from the Taiwanese experience is that a robust irrigation system was built on institutions that allow effective coordination of the activities of farmers, enhance the development leadership and problem-solving efforts in various scopes and scales in a complementary manner. These institutions enable individuals and organisations at different levels to engage in continuous learning and adaptation to the changing environment (Lam, 2006b). Many social systems and policy situations could be described as 'complex', depending on different factors. An appreciation of the role of such a 'complex system' and a better understanding of how institutions can help cope with such 'complexity' are fundamental to policy analysis and action (Lam, 2006b). Another example is China, which has invested substantially to increase and protect water supplies by modernising irrigation systems. They have adopted advanced water management policies, institutions and technologies. They have also increased watershed protection by means of extensive approaches that range in scale from the trans-boundary to the national and farm levels. Both supply and demand management are important tools in China's water policy (Global Water Partnership, 2013).

To summarise, in most countries, irrigated water is one of the important inputs that boost agricultural productivity. Although not all irrigation schemes are for the public good, many of them are and this means that government provision or subsidisation is necessary. For instance, the Japanese government has invested heavily in irrigation projects but their management is often delegated to village associations. This practice was transferred to Korea and Taiwan through Japanese colonialism in the twentieth century. It is not surprising that in all agricultural success stories, the government has played a key role in providing irrigation infrastructure, although the modes of financing, construction and management of irrigation projects have differed across countries and over time (Chang, 2009). The irrigation management approach in any country depends on a variety of internal and external factors, which policy-makers and implementers cannot ignore. These factors influence their choice of different policy instruments to govern their irrigation economies. For instance, in countries where a small proportion of the population depends on groundwater irrigation for their livelihoods, it is not difficult to adopt relatively tough regulatory measures. In contrast, where a large portion of the population depends on groundwater irrigation, it is more difficult to implement tough regulatory measures so a more participatory management approach would probably be more suitable (Shah, 2014). Groundwater resource management is dependent on a complex social system, socio-ecological situation, level of economic development, political commitment and the society's level of awareness about the sustainability of the resources. This requires raising the level of awareness, providing reliable information

and running advocacy campaigns at all levels to develop a consensus on the seriousness of these challenges. Likewise, it is vital to adopt diverse institutions to achieve sustainable water-resource management in order to change the livelihood of the beneficiary farm households, as well as to transform the agricultural sector to facilitate the overall development process.

## 2.6 Summary

Institutions are essential for economic development and social transformation. The differential ability of countries to engineer effective and equitable economic processes depends on their institutional capacity and diversity (Chang, 2002). Institutions expected to determine the capacity of the state to formulate and implement policies and strategies in a credible manner to attain the social well-being of citizens. However, in practice, building institutions is not an easy task; some are internal to the institutions themselves, while others have a more social dimension that requires long-term strategies to regulate social behaviour. There are costs associated with nurturing and running new institutions, so institutions are not easy to change. In practice, building institutions has been achieved through a mixture of deliberate imitation and adaptation of experiences from elsewhere, as well as local innovations (based on the national economic, social, cultural and other aspects). Institutional capacities for growth and development are socially engineered, based on 'learning-by-doing' or 'trial and error' and differed across societies/nations.

The IPE acknowledged the concept of the OIE, which does not take an individual's motivations and perceptions as given, but argues that these are shaped by the surrounding economic, social and cultural institutions. The OIEs understood institutions as a special type of social structure with the potential and power to mould the capacities and behaviour of agents: they have the capacity to change aspirations instead of merely enabling or constraining them (Hodgson, 2006). The OIE economists claimed that it is necessary to examine the state's role in development through the allocation and deployment of resources to improve the collective life of the society (Hodgson, 2006). The argument of the IPE, therefore, is consistent with that of the OIE regarding the role of the state and the existence of a wide range of diverse institutions for the allocation of resources for purpose of sustainable development and social transformation.

The IPE adopts a political economy approach for the analysis of both the state and the market characterised by institutional diversity (Chang, 2002). In contrast, the proponents of neoliberal economics (i.e. NIE) have little to say about the issue of institutional diversity because they believe in an abstract market economy. Moreover, the NIE School claims that markets can and should be free from politics. However, in practice, the emergence of markets often needed heavy state involvement and a well-functioning market economy, which is impossible without the existence of a well-functioning state. For instance, the developmental crises that many developing countries faced in the last two decades of the twentieth century were due to the assumption of the primacy of market institutions and the belief that these developed naturally so long as the state did not interfere with their evaluation (Chang, 2003). However, in practice, markets function effectively

depending on the existence of diverse institutions (including the state) to regulate who can participate in the system and who cannot.

The IPE postulates a two-way causation between individual motivations and social institutions, rather than a one-way causation from the individual to institutions, as proponents of the NIE believe. It takes strong institutions and politics to break the conceptual shackles of a neoliberal political economy, which dominated the debates on the role of the state (minimal state intervention) in economic development during the last two decades of the twentieth century (Chang, 2002; 2003a). Furthermore, the proponents of the IPE believe that mainstream institutionalists are highly problematic when it comes to understanding the relationship between institutions and economic development, seeing it as linear and uniform across space and time (Chang, 2011). They ignore the impact of economic development on institutions and focus exclusively on how institutions affect development. Instead, the proponents of the IPE believe that economic development has a significant impact on nurturing new institutions and modifying existing ones, and that institutions are crucial for economic development. It is obvious that a well-functioning institutional system helps the state to tackle socio-economic, political and cultural problems, and achieve the development targets they have set. Nevertheless, well-functioning institutions alone will not achieve the development targets of a country – this must be accompanied by human capital development and technological progress. The role of an effective state and the participation of all stakeholders in the development process are equally necessary. When designing effective and strong institutions, a developmental state should build distinctive capacities to achieve its development agenda in a legitimate and credible manner.

The appropriate role of the state in development and social progress has been a central concern of policy-makers since the beginning of capitalism and the rise of development economics after the Second World War made this aspect of economics even more important (Chang, 2003a). Following this, the notion of the developmental state has renewed in the Global South and played a significant role in the economies of the East Asian and Southeast Asian countries since the post-Second World War. A developmental state is distinguished by achieving significant economic growth, as well as resource allocation and redistribution to realise social benefit, which contributes significantly to a better standard of living for a large proportion of the population (Johnson, 1999; Leftwich, 2008). These significant improvements served to legitimate the developmental states in the East Asia. Building the developmental state requires commitment from every stakeholder in the economy but, more importantly, from the state institutions, i.e. political elites.

The capacity of the developmental states to implement effective and coherent development policies and strategies depends on the combination of bureaucratic autonomy, a broad-based state–society coalition/s, institutional and socio-political capabilities, among others. For instance, the East Asian developmental states believed that achieved equitable growth based on a concerted effort by the state to formulate and implement appropriate policies and to nurture institutions based on their own contexts. Some attributes of a developmental state worth mentioning are:

- It is an activist state and it is not an overseer, i.e. it is an active participator in the development process;
- It is consistent in its pursuit of development objectives;
- It evolves in the light of the changing needs of the society in which it is embedded;
- It is well-stated, risk-taking (can assist entrepreneurs to take risks);
- It is legitimate and paves the way for democracy in the long-term; and
- It establishes a 'pilot agency' within the central bureaucracy whose policy heartland is the industrial profile of the economy and the future growth path of the country.

The East Asian countries adopted a developmental state model to break free from the vicious circle of poverty and to sustain economic growth. Many of them made great progress in catching-up, although this has not been straightforward. The East Asian development experience indicates that countries in catch-up situations can quickly transform their economies. Nevertheless, this does not mean that state intervention addresses all development evils and outcomes are mixed, depending on the execution capacity of the states.

The East Asian experiences show how the developmental state can promote agricultural transformation and economic development in general. For instance, the Asian Tigers initially abolished landlordism and distributed the land to the rural masses, and eventually embarked on successive development efforts by formulating and implementing appropriate policies and nurturing well-functioning institutions. The success of land reform in Japan, Korea and Taiwan was possible, partly because of the strict imposition of land ownership ceilings in the early days of land reform (Chang, 2009). The role of the state has positively affected investment in public goods such as agricultural research, education, extension, irrigation and infrastructure, thereby increasing agricultural productivity. South Korea and Taiwan, for instance, produced subsidised agricultural inputs via using state-owned enterprises and distributed to farmers through state-managed agricultural cooperatives (Chang, 2009). State-led rural development (accompanied by pro-poor policies with respect to agricultural diversification) leading to higher incomes for farmers was crucial to their success and, conversely, the absence of this led to failure in many of the SSA countries.

However, there is no single blue print development model that is recommended for every country that will lead to success at the same pace. The good development model is the one that a nation adopts based on its own context to achieve sustainable development. However, the East Asian developmental state can indeed serve as a good example of development model than the Euro–American development (neoliberal) model, for today's developing countries. This is why because a developmental state approach expected to have a room to adopt according to the country's context. This means, it is considered not as rigid as the neoliberal is one (i.e. imposed based on predetermined terms and conditions). The developmental state model can be expected to adjust/re-adjust based on the contexts of the respective countries and on the dynamism of the existing global political economy.

For instance, adopting an appropriate or context-specific development ideology and good developmental policy choices are considered as the key instruments in the success story of Botswana and Mauritius (Beaulier, 2003). Therefore, if other SSA countries want to replicate this success story, they should be expected to adapt the development model to their own contexts and make appropriate development policy choices when they design their development projects. The question is, where good policies come from and why are some more effective than others in achieving substantial development outcomes? The answer simply lies on having (or not having) a context-fitting developmental model and effective institutions. The quality of institutions is critical more than anything for the success of the developmental state, and evidence from East Asia bears this out. Building vibrant institutions and a competent state bureaucracy to formulate and implement development projects are crucial requirements and a priority agenda for the developmental state model (Carroll & Carroll, 1997).

The question is can other SSA countries replicate the success stories of the developmental states. The argument presented in this thesis is yes this is possible (though not necessarily in all of them) if they consider their context and adapt accordingly. However, this does not mean that all SSA countries should follow exactly the same policies and strategies as these successful countries have adopted, and not all SSA countries expected to adopt the developmental state model. For success, they should base their developmental models on their own socio-economic, political, cultural, geographical, and historical circumstances, which are different in each country. However, what is essential to sustain the development process in these countries is a capable developmental state with development policies that boosts public investment in social, physical, and human capital, effective institutions, macroeconomic stability, and the role of market. To build successful developmental states, in particular, the SSA countries should pay attention to the broad-section of embedded state–society or coherent state–society relations among the common features of the classic developmental states. An effective broad-based state–society relationship depends on the capacity of the state bureaucracy and on the existence of strong civil society organisations. The existence of a broad-based state–society relationship is considered one of the essential instruments to achieve economic transformation by creating a development opportunity for all stakeholders, or by allowing the involvement of all groups of the society in the development process.

In general, committed political leadership must strive to adopt contextually appropriate policies. Even though it can be bitter and challenging, it is possible for African governments to adopt and articulate good development policies and strategies. This is possible only if the political elites start looking inward (recognising their own internal problems) rather than outward (externalising their problems), and resist pressures coming from their former colonial masters and the international institutions to conform to neoliberal paradigms under different terms and tied-conditions, which ultimately hijack their own national development interests.

As a production input in agriculture, irrigated water is an important socio-economic ‘good’, playing a positive role in improving the livelihood of farm households, and ‘bad’ when it has negative externalities

(Hussain & Hanjra, 2004). Irrigation can certainly improve agricultural productivity, together with other modern agricultural inputs. However, irrigation technology is both expensive and complex in terms of capital and institutional requirements, and is often managed in the context of national governance. Governments have facilitated rural development by providing considerable public subsidies for the installation of irrigation infrastructure and other modern agricultural inputs to support the beneficiary farm households and to transform the agricultural sector in general. Irrigation management relates to the broader issues of water-resource management and economic development issues that demand the involvement of various stakeholders and diverse institutions at different levels; increasingly this means joint management and partnership among different stakeholders. Building local leadership skills and institutional capacity, and changing the awareness of the beneficiary farmers are key factors for the successful participatory irrigation management approach.

However, building suitable and workable institutions is not easy and it demands commitment from both government and society. The problem of sustainable irrigation management is that it is neither state nor market based; it is somewhere in between, which requires decision-making by all stakeholders at different levels (Lam, 2006b). The development of adequate social capital, such as inclusive state–society cooperation, helps to realise the development potentials in the various domains of collective action (Evans, 1995). Research on the East Asian model suggests that a synergy between farmers and irrigation managers can help to bring about good irrigation management performance (Lam, 1996) because farmers develop a sense of ownership or co-production management through their participation. It is clear that effective state intervention is required to nurture effective and diverse institutions according to their respective contexts and the nature of their infrastructure.

## CHAPTER THREE: POST-INDEPENDENCE AFRICAN ECONOMIES: AN OVERVIEW

### 3.1 Introduction

The majority of the population in SSA live in poverty. The process of globalisation has left most African countries marginalised and many countries lack basic social and physical infrastructure services. Their economic performance has failed to cope with the fast-growing population and, consequently, at the beginning of the twenty-first century, Africa is unable to compete equally in the global economy (Annan, 2000). Immediately after independence in the 1960s, many countries in Africa attempted to adopt either a state-led development approach or a pro-capitalist development alternative, which theoretically advocates the role of market primacy and assumes that markets are natural institutions, while states or other institutions are human-made substitutes (Mkandawire & Soludo, 1999; Mkandawire, 2001). However, in the real world, the establishment of well-functioning market institutions depends on the existence of strong and well-functioning state institutions (Chang, 2002; 2003a); i.e. the emergence of markets often requires state intervention. The reigning development paradigm required a strong state to lead the development efforts in the light of limited markets and private capital after these countries attained their independence. Accordingly, the sub-period was characterised by a relatively high growth performance in the GDP and per-capita income. The GDP of the SSA region grew, on average, 5% per annum with a 2% per-capita income growth rate for nearly one-and-a-half decades after their independence (Fosu, 2009). However, the early and late 1970s constituted a period of supply shocks, both positive and negative. The negative shocks derived primarily from higher petroleum prices and droughts in many African countries, and the state controls became even more binding and widespread (Fosu, 2009).

While many countries experienced negative supply shocks, others enjoyed the commodity price boom for a short while until the commodity price declined again. Unfortunately, positive shocks tended to lead to enthusiastic government spending which often resulted in a sub-optimal, intertemporal allocation of resources. When the boom invariably ended, governments were became ‘cash-strapped’ and forced to borrow to continue the ‘often bloated’ projects or simply abandon incomplete ones. In either case, there would be efficiency losses and a sharp deterioration in the socio-economic conditions. These myopic boom–bust phenomena tended to reduce overall growth resulting in a drop in the average, annual per-capita income to approximately 1% (Fosu, 2001; Fosu & O’Connell, 2006; Collier & O’Connell, 2008). Although SSA countries generally experienced poor economic performance during this period, there are notable exceptions that achieved an average GDP growth rate of least 4% annually, which was about 1% above the population growth rate (Fosu, 2009). This considerable recovery has occurred since the late-1990s. Since the beginning of the new millennium, the annual GDP growth rate of SSA economies has averaged between 4% and 4.5%. Furthermore, a number of strong performing countries have experienced booms in their respective exports,



including oil and other commodities. However, in terms of trade, the whole region has improved considerably since the late-1990s (Fosu, 2009).

This chapter provides an overview of the African economies, since their post-independence with the exceptions of Ethiopia, which has never been colonised. It is crucial to see the overall picture to understand whether the previous development models have been successful or not, and to identify development constraints and opportunities to strengthen the development process. Furthermore, this historical assessment provides an opportunity to see whether African countries (not necessary all of them) need to shift their development ideologies from the current predatory system or unregulated the so-called free market to workable and context fitted development paradigm or not.

### **3.2 Africa's post-independence economic situation (1960s–1970s)**

Economists have identified path dependence as one of the important features of the growth process. This means that what eventually happens to an economy depends greatly on the point of departure or initial conditions. There is ample evidence to suggest that large qualitative differences in economic outcomes can arise from small differences in initial conditions. The initial conditions affecting economic growth are: the level of per-capita income, human capital development, natural-resource endowment, the structures of productivity and production, the degree of economic openness and its form of integration, the development of physical infrastructure, and institutional variables such as governance, land tenure and property rights (Romer, 1993; Mkandawire & Soludo, 1999). In the case of Africa, these conditions include the nature of colonial rule and the institutional arrangements inherited from the former colonies, the decolonisation process, and the economic and political interests of the former colonial masters after independence. Identifying these initial conditions incorrectly can undermine policy initiatives and outcomes. In practice, government policies are not simply a matter of choice made without contextual consideration of a given country (Mkandawire & Soludo, 1999). To avoid some of the unpleasant comparisons and to develop appropriate development policy directions, it is important to appreciate the differences and similarities in the initial conditions.

From the 1960s, newly independent African countries looked forward to a vision of development based on state-led economic development. These so-called developmental states guided by the thesis of modernising the society through state-led capitalism and the industrialisation strategy of import substitution (Mkandawire & Soludo, 1999; Mkandawire, 2001). Until the late 1970s, Africa's development strategy spurred a reasonable level of economic growth, in line with other parts of the world, and at one time, some of them ranked with the best-performing East Asian economies (Mkandawire, 2001). During the immediate post-independence period, most SSA countries had strong governments that took the task of nation building and the development agenda seriously. In several cases, they managed to attain a positive and robust rate of economic growth. However, a disastrous combination of external shocks (a sharp rise in the oil price and a collapse in the price of their primary commodities) triggered an economic collapse, which started around the

late-1970s and caused the African debt crisis of the 1980s. The primary commodity-dependent nature of these countries made them extremely vulnerable to declining trade and commodity price variability (Mkandawire & Soludo, 1999; Mkandawire, 2001; UNCTAD, 2003; Sindzingre, 2004; Nabudere, 2006).

For instance, the ratio of export to GDP in Africa (and SSA) collapsed from 33% and 31% in 1974 to 27% and 25%, respectively, in 1975 and did not recover in a sustained manner until the end of the twentieth century (World Bank, 2007). The export ratio was much higher in Africa in 1974 than in Indonesia (28%), South Korea (27%), and Thailand (22%). In the subsequent years, all these countries overtook Africa, reaching an export to GDP ratio ranging from 41% to 44% in South Korea, and 67% to 74% in Thailand, compared to Africa's ratio of 33% to 38% in 2000–2005 (World Bank, 2007). Nevertheless, the political and economic historical record of the continent reveals a very mixed output. Most of the first generation of African leaders was preoccupied with development and nation building, to the extent that the post-colonial state in Africa has been dubbed as 'developmental' by some observers (Mkandawire & Soludo, 1999; Mkandawire, 2001). Africa's economic performance has not always been as dismal as is usually portrayed in the literature, as Table 3.1 indicates its growth record between 1960 and 1975 (Bangura, 1992; Mkandawire, 2001; Arrighi, 2002). The analysis of the development experience in most developing countries (i.e. those that experienced growth in GDP per capita of at least 3%) over this period reveals that 11 of the best-performing 50 countries were in Africa (and nine in SSA). The fastest-growing developing countries up to 1975 were from Africa, i.e. Gabon and Botswana's growth rate exceeded that of Hong Kong, Taiwan, Malaysia, and Thailand in 1960–1975 (Rodrik, 1997).

**Table 3.1: GDP growth rate (in %) in some selected African and East Asian countries**

| East Asian countries | 1960–75 | 1975–89 | African countries | 1960–75 | 1975–89 |
|----------------------|---------|---------|-------------------|---------|---------|
| Singapore            | 7.4     | 5.1     | Gabon             | 7.87    | –3.4    |
| Japan                | 7.05    | 3.53    | Botswana          | 6.16    | 6.17    |
| South Korea          | 6.47    | 7.0     | Lesotho           | 6.0     | 2.15    |
| Hong Kong            | 6.12    | 6.61    | Swaziland         | 4.76    | –0.86   |
| Taiwan               | 5.86    | 6.57    | Nigeria           | 4.15    | –2.41   |
| Thailand             | 3.94    | 4.72    | Tunisia           | 4.14    | 2.25    |
|                      |         |         | Togo              | 3.49    | 0.22    |
|                      |         |         | South Africa      | 3.39    | –0.39   |
|                      |         |         | Côte d'Ivoire     | 3.30    | –1.56   |
|                      |         |         | Egypt             | 3.04    | 2.93    |
|                      |         |         | Guinea            | 3.02    | –1.27   |

Source: Adapted from Rodrik (1997)

However, the two oil shocks of the early-1970s and late-1970s badly affected many African economies and decelerated their economic growth. After almost two decades of independence, in most cases the existence of

a single party or military rule undermined the independent democratic movements. The promise of development and abundance for all turned out to be illusive for the majority. These states stagnated in underdevelopment and were inclined to accept uncritically Western modernisation and a development ideology that failed miserably (Obi, 2001). Only a few African countries, such as Botswana and Mauritius, have sustained their growth path up to the twenty-first century, and hence, they are classified as ‘African miracles’ or ‘democratic developmental states’ (Mkandawire, 2001; Fritz & Menocal, 2006). Most African countries stepped into deep economic crisis in the 1980s and their economic growth has continued to fall. Furthermore, the adoption and implementation of SAPs since the 1980s discounted the role of the state in economic development in Africa, and negated the prospects for growth and the consolidation of the developmental state on the continent (Mkandawire & Soludo, 1999; Mkandawire, 2001). African development lies more with what is approved externally and less with what is done internally; countries have fully embraced the neoliberal paradigm, which has destroyed the state’s role in shaping and defining their agendas of self-reliant development (Obi, 2001).

The fact is that Africa’s state-led development approach at independence often failed to build a strong developmental state and achieve sustainable economic and social outcomes. Most countries could not engineer economic ‘take-off’, ensure industrialisation, or diversify the economy. Given the external factors, the internal factors, such as the rise of authoritarian military dictatorships and one-party regimes, created an obstacle to building a hegemonic development ideology and coalitions. Most of the regimes lacked strategic partnerships with the indigenous private-business sectors and the society. They depended on the capital of former colonies, rather than building a local corporate sector through domestic resource mobilisation (Mkandawire & Soludo, 1999). Consequently, there were low rates of savings and investments, flawed industrialisation strategies, and low investment in R&D and human capital development. All these are the result of extreme dependence on external conditions and consequent shocks (such as the rise of oil prices followed by debt crisis). Thus, Africa remains the most underdeveloped region in the world. Poverty, inequality, lack of basic infrastructure and institutions are some of the core development challenges of the continent.

The two oil price shocks of 1973–1974 and 1979–1980 are the main factors for the collapse of the African economies, and the subsequent debt crisis aggravated the situation further. The rise in oil prices had an adverse impact on the trade balance of oil-importing countries by undermining domestic investments and triggering a fiscal crisis in most countries. The second oil shock coincided with sharp rises in real interest rates and the global recession of 1981–1982, which depressed African exports. Based on the erroneous assumption that quick recovery from the global recession would soon restore the prices of non-fuel commodities, most countries resorted to external borrowing to finance fiscal and external imbalances, which lead to another problem of debt crisis (Balassa, 1981; 1995; Kuznets, 1988; UNCTAD, 1998; 2007). For instance, ‘[s]ome Asian countries with a strong manufacturing base chose to restrict the increase in their debt indicators by expanding export volume via a variety of export promotion measures and industrial policies.

Many other developing countries did not adjust in such way that either because their economies were not sufficiently diversified or because they deliberately chose not to' (UNCTAD, 2007:103). When looking at the case of Africa, the continent's exports remain undiversified, focusing on primary commodities, i.e. natural resources and agricultural produce. Africa's heavy dependence on primary commodity exports poses difficult and persistent problems, in that the effective management of the production and export of natural resources often requires state intervention, compounded by prudent macroeconomic policies and strong institutions.

What were the differences and similarities between SSA and the East Asian NICs at that time? For many African countries, there was little room for adjustment because of their non-diversified economies and the decline in non-fuel primary commodity prices during the global recession. The East Asian developmental states and SSA countries have a common feature of external orientation, i.e. a dependence on external trade to drive their economic progress. The difference between the two regions was that the Asian economies were more diversified in terms of technological intensity and composition of exports, while their counterparts in SSA relied almost exclusively on unprocessed primary export commodities (UNCTAD, 2007). Indeed, if there was any failure in development-policy formulation, it was the lack of strategies to diversify their economic bases through, for instance, 'export-investment nexus' or 'investment-profit nexus' (Mkandawire, 2001; Arrighi, 2002). As illustrated by the experiences of the Asian NICs, progress in increasing the technology intensity of exports is a means of addressing vulnerability and dependency to remain on a sustainable growth trajectory (Sindzingre, 2004). Much of the variance in growth performance during the adjustment period in Africa could be due to differences in productivity and export performance in the industrial sector (Pieper, 2000).

Furthermore, the external environment, particularly the geopolitical context of SSA and the NICs of Asia was also markedly different. The antagonists of the Cold War had different relations with each of these groups, largely due to their different geographical locations, which produced diverse outcomes. On the one hand, the United States granted its Asian allies preferential access to its domestic market and this was critical for the 'take-off' of the region, as were the large amounts of aid it provided. For instance:

During the Korean War, in 20-year period 1950–70, US aid to Japan averaged \$ 500 million a year. Aid to South Korea and Taiwan combined was even more massive. Huge amounts of military and economic aid to South Korea, and investment in infrastructure as well linked to the Cold War. From 1946–78, military and economic aid to South Korea amounted to \$13 billion (\$ 600 per capita) and to Taiwan \$5.6 billion (\$ 425 per capita) (Arrighi, 2002:30–1). The true dimensions of this munificence are revealed by the fact that the nearly \$6 billion in US economic aid to South Korea in 1946–78 compare with a total of \$ 6.89 billion for all of Africa and of \$ 14.8 billion for all of Latin America in the same period (Arrighi, 2002:31).

On the other hand, SSA became the theatre/playground for playing out Cold War confrontations between West and East. Misrule of state power for the purpose of the private gains overlooked and even in some cases totally disregarded the social wellbeing (Arrighi, 2002 & Sindzingre, 2004). These differences in the initial conditions between East Asia and SSA were highlighted further by differences in their inherited

legacies in the domains of state formation and national economic integration. These huge disparities in the post-colonial economic heritage of political economy configurations were critical in shaping the coping strategies or abilities of the two regions in the aftermath of the oil crisis (Arrighi, 2002).

To conclude, external factors and institutions have had a much larger influence on Africa's economic and political prosperity than is usually acknowledged. Sometimes, these have had direct adverse consequences for the nature of political and economic governance in some countries, although this is not entirely free from the internal debilitating (economic and political) dynamics, which resulted from some of these processes. Favourable external environments often lead to positive economic outcomes. In the 1960s and early 1970s, some African countries proved that they were capable of achieving robust economic growth in such circumstances. However, this robust economic growth was not sustained due to the two oil crises, followed by the debt crisis on the continent. After this economic recession, almost all African countries (except those who entered into the socialist camp or adapted socialism or a planned economy) were forced to adopt the 'Breton Wood Institutions' or SAPs as a panacea for their crises by the international financial institutions.

### **3.3 The African economy during the reform era (1980s–1990s)**

The history of the global political economy is replete with the initiation of different reform programmes. Thus, the issue of economic reform is not peculiar to only the developing countries. The content, context and strategy of reforms vary across countries and regions because of different factors. Various countries implemented different economic and political reforms at different times to address the distortions (if any) and to make progress in their economies. The variation of factors for economic reform are often largely dependent on the prevailing socio-political and socio-economic circumstances of a given country and often moderated by the prevailing context of the international political economy (Adeyemo et al., 2008; Luqman & Lawal, 2011). The SAPs/Washington consensus is one reform programme initiated by developed countries and their institutions as a remedy for the economic crisis happening in many developing countries.

The commonly known '*Washington Consensus*' menu masterminded by World Bank and IMF was presented to the table to Africans attached with painful conditionalities. Consequently, development aid was released provided that governments were willing to swallow the prescribed '*poison pill*': namely, deregulation, privatization, devaluation, free market, free trade, minimal role of state etc. Simply, African governments were trapped into dilemmas of the choice between '*the devil and the deep sea*'. Lately, almost all of them were compelled to endorse the neoliberal development ideology (Daddi, 2013:5).

However, there are several arguments regarding the outcome of SAPs in Africa between the proponents and non-proponents of the programme. Economists, who are proponents, agree on several indicators of the success of the adjustment programme in Africa (Jega, 2000). These include improvements in the GDP growth rates, investment motivation and the efficient use of resources, which reveal an increase in productivity. Although there are pockets of successes here and there, some of the social crises that emanated from the implementation of adjustment programmes during the 1980s and 1990s have been blamed on recent economic reforms in Africa (Jega, 2000). The SAPs implemented in Africa were rooted in the neoclassical

economic tradition, which is premised on the notion of an open and competitive economy and minimalist state intervention. Although these adjustment policies dictated by the World Bank and IMF were deemed suitable for matured economies, their strict applications resulted in worsening the socio-economic conditions of many transition economies in Africa (Olukoshi, 1995;1998; Jega, 2000). The SAPs are not working as expected in Africa and have not made much of a difference. The World Bank placed considerable value on the SAPs, answering its own question:

Is adjustment paying off in Sub Saharan Africa? The answer is a qualified yes. Adjustment programs may not have raised all countries' GDP growth, exports, savings, and investment rates to those of adjusting countries in other regions. However, the stronger reformers in Africa have turned around the decline in economic performance and are growing for the first time in many years. There also are signs that new firms are being created, that exports are growing, that private investment is picking up, and that savings performance is improving (World Bank, 1994:131).

The World Bank regretted that after more than a decade of SAPs in Africa, reforms remain incomplete, but this was not due, it was argued, to the inefficiency or poor design of the SAPs but rather to the lack of implementation capacity by Africans themselves. Whatever the reason, the bottom line is that the SAPs have not delivered the promised recovery and growth, and several important gaps and weaknesses of the programme are increasingly acknowledged. There is considerable concern that the reforms undertaken to date are fragile and that they are merely returning Africa to the slow growth path (World Bank, 1994). Table 3.2 presents the economic performance of Africa during the pre-crisis and post-crisis era (the SAPs) based on some selected macroeconomic indicators. These show that the development prescriptions that were provided by the developed countries to Africa over the last four to five decades did not resolve the underlying socio-economic and political problems or induce industrialisation (Chang, 2002; UNCTAD, 2009). The states that wholly endorsed the neoliberal development ideology eventually ended up in a total economic mess, with catastrophic results: unemployment, poverty and inequality worsened beyond expectation (World Bank, 1994)

As indicated in Table 3.2, since the 1980s African economies have deteriorated in almost all economic indicators except for the rates of population growth and inflation. From independence to the end of 1990s, the growth curve for African economies was an 'inverted U-shape', with the turning point taking place in the early 1970s. Indeed, to understand the deterioration in performance, it is important to shed some light on the dynamic characteristics that made the good performance of the post-independence era unsustainable. In addition to these macroeconomic indicators, African agriculture lags far behind other developing countries in terms of productivity, modern technology utilisation, and other factors such as irrigation, high variety seeds, fertiliser and marketing due to rural infrastructure bottlenecks. Thus, food prices have been rising rapidly for more than two decades, without an adequate supply response to keep pace with population growth, despite increased food imports (Mkandawire & Soludo, 1999). Until recently, African countries faced unfavourable terms of trade due to their high imports such as capital goods, and the export sector was characterised by unprocessed primary commodities. Long-term investment, which is one of the fundamental indicators for



development, was not stimulated due to low levels of savings and low-income mobilisation (Mkandawire & Soludo, 1999).

**Table 3.2: Africa's economic performance, 1965–1994**

| Indicators (average)                | Performance (in %)    |         | Performance (in %)           |         |         |
|-------------------------------------|-----------------------|---------|------------------------------|---------|---------|
|                                     | pre-crisis period/era |         | post-crisis (SAPs)period/era |         |         |
|                                     | 1965–73               | 1974–79 | 1980–85                      | 1986–89 | 1990–94 |
| Population growth rate              | 2.7                   | 2.7     | 3.0                          | 3.0     | 3.0     |
| Growth rate of GDP                  | 5.7                   | 3.5     | 1.8                          | 2.5     | 1.9     |
| Growth rate of per-capita GDP       | 3                     | 0.7     | –1.1                         | –0.5    | –1.1    |
| Growth rate of agricultural output  | 2.7                   | 3       | 1.5                          | 2.7     | 2.1     |
| Growth rate of manufacturing output | 7.3                   | 6.7     | 5.2                          | 2.5     | 1.3     |
| Investment as a ratio of GDP        | 16.5                  | 20.9    | 16.3                         | 15.6    | 15.3    |
| Growth rate of investment           | 9.6                   | 6.9     | –4.8                         | 1.2     | 0.8     |
| Savings as a ratio of GDP           | 16.2                  | 19.7    | 14.9                         | 13.8    | 12.7    |
| Growth rate of exports              | 8.2                   | 2.6     | 0.4                          | 3       | 0.6     |
| Growth rate of imports              | 7.4                   | 6.2     | –2.4                         | 0.7     | 0.4     |
| Rate of inflation                   | 5.8                   | 13.8    | 18.8                         | 21.7    | 27.2    |

Source: Adapted from the World Bank (1994)

Furthermore, the external debt of SSA has more than doubled over the adjustment period without any increase in economic growth to sustain its servicing in the future. Africa's infrastructure and human capital formation, which was deemed fragile in the beginning of the adjustment period, deteriorated even further. For instance, Box 3.1 alludes a misguided direction in educational policy by the World Bank for African countries during the SAPs. Africa's capacity to manage the crisis has been further eroded by a massive 'brain drain' caused by a sharp decline in real wages, massive retrenchment, and continuous vilification of civil servants by corrupt members in corrupt institutions (Mkandawire & Soludo, 1999). The institutions for development are either very weak or non-existent in most African countries. The success indicators of the African economy in the adjustment era were simply used by the World Bank to design more policy instruments (such as the accelerated development of 1981, sustainable development of 1989 and adjustment in Africa in 1994), instead of success in real economic growth (Mkandawire & Soludo, 1999).



**Box 3.1: Educational policy reform in Africa during the SAPs period**

‘The World Bank plays a major role in defining education policies in Africa, both by providing direct funding and tying up local counterpart funds in the direction of its choices, and by providing the intellectual basis for the new policy directions in African economies. World Bank policies on education have largely been influenced by the literature on the rate of the return on education (RORE), which provides a market-compatible rationale of state expenditures on education’ (Mkandawire & Soludo, 1999: 46). The World Bank has been an important participant in such analysis and has drawn some conclusions from it that Bennell (1996: 183) summarised as follow:

- ROREs for all levels of education generally exceed the aggregate social opportunity cost of capital;
- ROREs in developing countries (and especially Africa) are higher than in the advanced market economies;
- The private and social ROREs are highest for primary education, followed by secondary education;
- Private ROREs to higher education are usually considerably higher than the corresponding social ROREs;
- The pattern of ROREs remains stable as countries develop with only relatively minor declines in ROREs.

However, Bennell (1996:183) ‘summed up the policy implication as First, all education at whatever level is a relatively attractive investment not only for individuals but also governments. Second, with certain caveats, in most developing countries primary education should receive the highest investment priority, followed by secondary education. Third, government subsidization of higher, and to a lesser extent, secondary education is excessive given the large differentials that exist between private and social ROREs. To remedy this misallocation of resources, students should be made to contribute significantly more to the costs of their own education. While social and private ROREs have tended to decline as a country’s per capita income increases, all levels of education remain relatively attractive *vis-à-vis* other types of public investment.’

This indicates that how the SAPs undermined the augmentation of broad-based and specialised human capital by their reliance on a static analysis of human capital returns and needs. Only recently, the dire shortage of critical skills and personnel in Africa has been recognised as an impediment to policy formulation and implementation. Much of the so-called ‘lack of capacity’ in Africa is donor imposed. For instance, nearly 40% of multilateral aid and financial assistance is spent on foreign experts, and about US\$ 4 billion goes annually to funding foreign technical assistance in Africa. If this money had been used for training programmes to build and strengthen institutions, for technological upgrading and R&D, the African human capital situation would most certainly be very different (Mkandawire & Soludo, 1999).

A higher level of education enhances a country’s social and economic capacity because education is a crucial instrument for building vital human capital. Building human capital is indispensable to accelerate economic, social and political transformation. African countries should learn from the historical experiences of developed and emerging developing countries about the significance of investment in human capital at all levels, which plays a key role in development. In all these instances, tertiary education has played a key role in the process of rapid and sustainable economic transformation through building the required middle- and high-level human capital. Because of incorrect policy direction on education during the era of the SAPs and the internal softness of African states (i.e. a lack of institutional capacity, legitimacy, societal cohesiveness and lack of administrative or political ability to implement development projects), Africa currently lags far

behind the rest of the world in the accumulation of the necessary human capital. Therefore, it is time to initiate pragmatic social-sector development programmes and invest considerable public funds to narrow the existing human capital gap.

Half-hearted pursuit of SAPs has not improved economic performance in many SSA countries. The evidence suggests that the culprit is not wrongheaded policies but that poorly functioning state institutions are at the root of the economic problems plaguing ‘neo-patrimonial’ states (Lewis, 1994; Kohli, 2004). What factors distinguished the neo-patrimonial states from the developmental states? Kohli (2004) elaborates on how a predatory/neo-patrimonial form of state can be distinguished from successful developmental states, as follows:

- Leadership tends to pursue more personal and sectional goals than public goals such as nation building.
- Neo-patrimonial states are generally staffed by individuals whose level of competence and professionalism as civil servants tends to be low.
- Relations of state elites to private sectors tends to be mutually corrupt, with state resources strengthening private rents that support the powerful positions of the ruling elites.
- The state’s downward reach is limited; these states generally suffered from a serious political disconnect between the state and the citizenry due to the absence of any normative glue to bind rulers and followers in a joint national development project.
- Use of state resources for personal benefit or for the benefit of personal associates; which is a reflection of poor public institutions, i.e. lack of development ideology and shared national development projects.

**Table 3.3: Distinguished features/typology of ‘neo-patrimonial’ and developmental states**

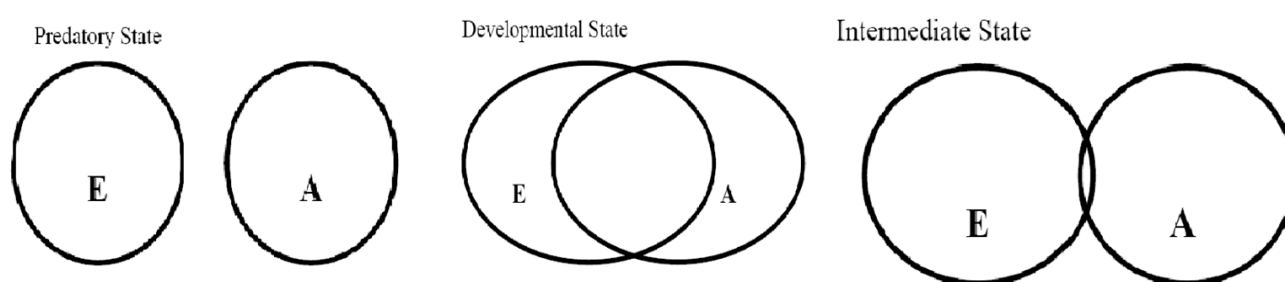
| Features                  | Predatory/neo-patrimonial                       | Developmental states                                                                                                                                       |
|---------------------------|-------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------|
| State bureaucracy         | Dysfunctional, based on patron-client relations | Functional: serves general interest, meritocratic recruitment, rules-driven, efficient; close synergy with political leadership: shared development vision |
| State–society relations   | State captured by particular urban elites       | Embedded autonomy: state acts autonomously, but embedded in dense networks with rising industrial capitalist (state centric)                               |
| Development vision        | None                                            | High economic growth, diversified economy, redistribution subordinate to growth                                                                            |
| Government’s system       | Personalised dictatorship; example: Zaire       | Authoritarian (military or multi/dominant party rule); examples: South Korea, Taiwan                                                                       |
| Key agents of development | None                                            | Dominant leaders or dominant party                                                                                                                         |

Source: Adapted from Pillay (2007:207–8)

Hence, state-led development in the predatory form obviously lacked purpose or capacity and thus turned into a development disaster (Kohli, 2004). Based on embeddedness (E) and autonomy (A), Peter Evans

identifies three types of states, namely, ‘predatory’, ‘intermediate’ and ‘cohesive’ developmental states (see Figure 3.1). ‘Predatory’ states may be more abundant in the less developed world than ‘cohesive-capitalist’ developmental states. The latter are deliberately and carefully constructed, whereas the former reflects the more common failure of state construction, and the subsequent evolution of traditional politics behind the modern state imported from ex-colonies (Kohli, 2004). While intermediate states, such as Brazil and India, either lacked autonomy (like Brazil whose state apparatus was not based on meritocratic recruitment and was thus short of competence), or lacked embeddedness (like India, although its bureaucratic apparatus was qualitatively close to the successful developmental states) (Evans, 1995; Kohli, 2004). Most states in SSA (except for Botswana and Mauritius) fit into this category, the ‘predatory’ states, which share the above-mentioned common characteristics of the neo-patrimonial state.

**Figure 3.1: Predatory and intermediate states and cohesive developmental state**



Source: Adapted from Evans (1995)

Nevertheless, from the beginning, the international institutions and donor organisations forced African countries to swallow the free-market ideology using a ‘one-size-fits-all’ approach without considering their political, economic, social, institutional and cultural contexts. However, a free-market ideology is not all bad, but it is not appropriate for African countries with immature economies, which do not fit with it. To initiate development in Africa, state intervention is necessary to mobilise resources, address market failures, construct or transform markets and capital.

The important question here is why did African countries remain a backward continent for four decades of the twentieth century? The literature points to the nature of their political economy, which is characterised by a ‘neo-patrimonial’ regime. It is plausible that the current backwardness of African economies is the result of the nature of their political and economic institutions vis-à-vis many other internal and external factors, such as a lack of committed political leadership, adopting a non-contextualised development ideology and the negative impact of colonialism.<sup>24</sup> The primary objective of colonialism in Africa was to extract natural

<sup>24</sup> Britain, in her colonies in Nigeria and elsewhere in Africa, created a fragmented and ineffective state (based on her indirect rule) on a social base hardly suited for ready transformation into a modern state. That is, the British in Nigeria created a country but not an effective state. The British in Nigeria sought to pursue their agenda of political control and economic exploitation very differently than the Japanese did in Korea: Japan sought to control and exploit while transforming the traditional Korean society, whereas the British in Nigeria pursued similar goals while squeezing the traditional society. The Japanese in Korea thus left behind the rudiments of a modern state and an industrial economy

resources rather than promote a productive agenda on the continent. The colonisers built no reliable institutions and infrastructure for the purposes of sustainable development; instead, they deliberately marginalised the continent from the global economy. Africa was considered a source of factors of production and a market for their industrial commodities, not a centre for investment and production. Thus, limited capital was attracted to Africa, which depended largely on the extractive sectors to earn resource rents without real value being added to the economy. This rent-seeking activity is the legacy of colonialism and is the main problem, even today. Absolutist and patrimonial political systems developed by colonialists and the softness of post-colonial African leaders have become persistent over time in most parts of the continent. Most political and institutional aspects in Africa are derived from their colonial masters or imposed from the international institutions and directly or indirectly fulfil the interests of the developed countries. The problem in many African countries is the lack of development of indigenous political and institutional dynamism based on the unique features of their respective countries. They need to promote indigenous political and institutional dynamism to accelerate the development and transformation process. For instance, the political elites of Botswana used the traditional institutions (Tswana tribal institution) to consolidate their modern state institutions and to encourage for the broad-based participation of all economic actors (Eriksen, 2011; Sebudubudu & Botlhomilwe, 2011).

### **3.4 The African growth miracle and structural transformation (from 2000)**

The period from around 2000 marks the beginning of the ‘African growth miracle’. This means that the start of the twenty-first century saw an era in which African economies grew relatively faster than the rest of the world (McMillan & Harttgen, 2014). SSA’s economy expanded on average by 4.6% per annum of GDP between 1999 and 2010 (5.2% excluding South Africa, which had the lowest growth rate during this period). Six of the world’s 10 fastest growing countries were in SSA. The region’s growth is underpinned by strong private and public investment. Gross fixed-capital formation in the region has increased steadily from about 16.4% in 2000 to 20.4% in 2011 (World Bank, 2013a). The increment of investment rates has contributed directly to boosting the productive capacity of the economy and helped to accelerate economic growth. FDI flows have also increased steadily in recent years; and it continues to be the source of capital flow and an important source of funding for the current account deficit in the region (World Bank, 2013a). Even though there is an increment in FDI, most of the FDI is focused on primary natural-resource extraction and is inclined to the resource-rich countries and to the service sector, such as telecommunications and financial institutions, to the detriment of the productive sectors of manufacturing and other job-creating sectors.

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on which a rapidly industrialising political economy could be built, while Nigeria in 1960 found itself ill-prepared to pursue such a journey (cf. Kohli, 2004:327–8). Economic exploitation/extraction was a part of colonialism, through direct or indirect political control, but the structures and process of establishing that political control varied. This variation occurred in part due to the differing realities on the ground; different colonisers brought different ideologies with them and the urgency, motive and capacity of colonisers differed across place and time (cf. Kohli, 2004).

**Box 3.2: Some facts about growth, inequality and poverty in Africa**

- ‘Africa’s economic growth has been truly remarkable. GDP per-capita in SSA has grown in the last decade at a rate of about 2.5–3.0% per annum compared to essentially zero per cent between 1960 and 2000. Six of the ten fastest growing economies in the world are in SSA. One can truly characterize the present growth spell as a quantum jump.’
  - ‘Among the more important factors that contributed to the acceleration of the pace of growth appear to be high commodity prices, a large inflow of FDI natural resources and land, falling fertility rates, and better governance.’
  - ‘Half of the population is still poor but significant progress has been achieved. The headcount poverty ratio has fallen from a high of 58 per cent in 1996 to 48 per cent in 2010, using the US\$1.25 a day extreme poverty line.’
  - ‘Yet, the total number of poor below the extreme poverty line increased from 349 million in 1996 to 414 million in 2010.’
  - ‘Income inequality is extremely high with six of the world’s ten most unequal countries being in Africa (South Africa’s present Gini coefficient<sup>25</sup> is 0.65). Income inequality increased slightly within Africa as a whole, the Gini coefficient on average rising from about 0.43 in 2000–2004 to 0.46 in 2005–2009.’
  - ‘Despite the creation of 37 million new and stable wage-paying jobs over the past decade, only 28 per cent of Africa’s labour force holds such positions. Instead, some 63 per cent of the total labour force engages in some form of self-employment or ‘vulnerable’ employment, such as subsistence farming or urban street hawking.’
- (Thorbecke, 2014: 5).

Unemployment and poverty are huge challenges in African economies and need to be tackled by adopting appropriate development models and building strong institutions. The conversion of Africa’s growth into poverty reduction is hindered by higher initial income inequality (see Table 3.4), the challenge to mobilise economic rents, including rents from natural resources for the benefit of a broader section of society, and continuing underperformance of its agricultural sector which is the mainstay of many African economies. It is without doubt that persistent high levels of inequality present serious challenges to poverty eradication, frustrates sustainable development objectives, and undermines the quality of economic development. Poor quality of life could spark social conflict. Therefore, economic growth alone is not enough to guarantee the sustainability of economic development and the equitable distribution of income, assets, education and other opportunities are important for the quality of sustainable development (Bhorat & Westhuizen, 2010).

However, a detailed assessment of the international experience spotlights two caveats to the generally accepted view (consensus) that “growth is good for the poor”. Firstly, the impact of economic growth on poverty differs significantly between countries Secondly, as incomes grow, it is highly likely that its distribution will change – economic growth often brings with it some change in levels of income inequality (Bhorat & Westhuizen, 2010).

<sup>25</sup> The World Bank defines it as the most widely used measure of the degree of inequality. The coefficient varies between zero, which reflects complete equality, and one, which indicates complete inequality. An index of 0.5 denotes the cutting point; an index greater than 0.5 indicates worse inequality, and one lower than 0.5 indicates a better distribution of income or low inequality in the economy.

**Table 3.4: Continental and regional disparities in income inequality (the Gini coefficient)**

| Continent/years | 1980–99 | 1990–99 | 2000–09 | Regions/years   | 1980–99 | 1990–99 | 2000–09 |
|-----------------|---------|---------|---------|-----------------|---------|---------|---------|
| Latin America   | 0.521   | 0.512   | 0.522   | Southern Africa | 0.524   | 0.533   | 0.485   |
| Africa          | 0.411   | 0.459   | 0.439   | Central Africa  | 0.289   | 0.451   | 0.45    |
| Asia            | 0.367   | 0.387   | 0.375   | Western Africa  | 0.393   | 0.441   | 0.422   |
| Europe          | 0.239   | 0.305   | 0.325   | Eastern Africa  | 0.324   | 0.384   | 0.41    |
|                 |         |         |         | Northern Africa | 0.409   | 0.364   | 0.374   |

Source: Adapted from World Bank (2011)

This indicates that the quality of the continent's economic development is still poor and the economic recovery has not created adequate employment opportunities to reduce poverty and inequality. As Table 3.5 shows, in contrast to SSA, poverty reduction proceeded in the rest of the developing world, including China. By any standards, the level of poverty in Africa is unacceptable and, therefore, African countries need to make an extraordinary commitment to eradicate it from the continent. Although the proportion of people living below the poverty line between 2000 and 2010 was smaller than between 1990 and 1999, the absolute number of people living below poverty line was much larger in 2000–2010. In Africa, there is weak regional integration of trade and investment to facilitate economic growth and reduce poverty to an acceptable ratio, unlike other developing countries (for instance, China reduced poverty by more than half within a decade). Therefore, African countries need to consolidate their regional integration to address severe poverty (UNECA, 2012).

**Table 3.5: Head count ratio of poverty in developing regions (in %)**

| Regions/years                         | 1990–99 | 2000–10 |
|---------------------------------------|---------|---------|
| Developing countries (included China) | 30.6    | 16.1    |
| Developing countries (excluded China) | 28.5    | 17.8    |
| China                                 | 35.6    | 11.6    |
| Sub Saharan Africa                    | 58      | 48.5    |

Source: Adapted from the World Bank (2013a)

Africa and particularly SSA have experienced relatively better economic performance since the turn of the millennium. Its GDP rose almost twice as fast in the first decade of this century compared to the last two decades of the twentieth century (UNECA, 2010). Growth in the SSA region is pushing numerous countries to middle-income status. For instance, in 2006, 13 countries in the region were categorised as middle-income. Today this figure has increased to 21 and according to the projections of the World Bank, 10 others could attain middle-income status by 2025 if the current growth trends continue (Africa Progress Report, 2014). Even though economic improvement has been widespread, meaningful economic diversification and

transformation has not yet been realised. There are still relatively high levels of unemployment, inequality and poverty, and a lack of social safety nets/social security, and limited social development in many countries. In the absence of meaningful diversification and transformation, many countries remain vulnerable to external shocks and are heavily dependent on informal-sector employment and output (UNCTAD, 2008; UNECA, 2010). The continent needs further diversification and meaningful structural transformation in all sectors of the economy to address the existing economic problems and to realise sustainable economic development.

Structural transformation assumes the reallocation of economic resources away from the least productive sectors of the economy to more productive ones. It involves two elements: the rise of new productive activities and the reallocation of resources, typically from agriculture to industry and modern services, leading to higher economy-wide productivity and progressively raising incomes (McMillan & Rodrik, 2012). Table 3.6 shows how structural transformation is measured using different key indicators. For most developing countries, this usually means shifting labour from subsistence agriculture to commercial agriculture, manufacturing and modern services (Martins, 2014). Without the first, there is little to move the economy forwards, and without the second, productivity gains are not diffused to the rest of the economy. Structural transformation of African economies was: (1) 'Largely growth reducing between 1990 and 1999.' (2) 'It was largely growth enhancing between 2000 and 2005.' (3) 'In the recent past it has been most pronounced in countries that stand to benefit the most, as measured by the share of the labour force in agriculture.' (4) 'It has been higher in countries with better governance and more effective institutions' (McMillan & Rodrik, 2012).

Structural transformation is considered, therefore, to be a critical prerequisite for economic and social development dynamism. It plays an instrumental role in sustaining economic growth, generating productive employment and raising standards of living. There is a significant cross-country heterogeneity, and there has been little evidence of structural transformation in Africa. In the last two decades of the twentieth century, structural transformation in Africa was largely growth reducing, but this has changed since the new millennium. This positive contribution of structural transformation to economy-wide growth paints a somewhat more optimistic picture of growth in Africa in the twenty-first century (McMillan & Harttgen, 2014). Nevertheless, this does not mean that all African countries have experienced growth reducing and enhancing structural transformation. For instance, estimates based on a sample of more than 24 countries in SSA between 2000 and 2010 show that the share of the labour force employed in agriculture declined by about 10%, but this was matched by a 2% increase in manufacturing and an 8% increase in the service sector (Young, 2012).



**Table 3.6: Measuring structural transformation using some key indicators**

| <b>Economic indicators</b>                        | <b>Socio-cultural indicators</b>                                     | <b>Institutional indicators</b>                    |
|---------------------------------------------------|----------------------------------------------------------------------|----------------------------------------------------|
| <b>Labour/employment share (in %) by sectors:</b> | <b>Composition of population (in %):</b>                             | <b>Effectiveness of institutions:</b>              |
| Agriculture                                       | Rural share of population                                            | Administrative capacity                            |
| Industry                                          | Urban share of population                                            | Taxation capacity                                  |
| Service                                           | <b>Human capital development:</b>                                    | Legal and technical capacity                       |
| Manufacturing                                     | Proportion of people with college degree from accredited institution | Coordination capacity                              |
| <b>Value added (as % of GDP) by sectors:</b>      | Proportion of graduated in science and technology fields             | Responsiveness of institutions                     |
| Service                                           | Gross domestic investment in R&D                                     | Extent of corruption & rent-seeking                |
| Manufacturing                                     | Strength and diversity of domestic private sectors                   | Peace and political stability                      |
| Industry                                          | <b>Social indicators:</b>                                            | Security of property rights                        |
| Agriculture                                       | Health and education                                                 | <b>Competitiveness and cost of doing business:</b> |
| <b>Labour productivity by sectors:</b>            | Fertility and life expectancy                                        | Governance and connectivity                        |
| Agriculture                                       | Maternal and infant mortality                                        | Inclusiveness                                      |
| Industry                                          | Access to water & sanitation                                         | Environmental sustainability                       |
| Services                                          | Access to telecom & electricity                                      | <b>Political participation:</b>                    |
| Manufacturing                                     |                                                                      | Voter turn-out at national election                |
|                                                   |                                                                      | Degree of civil engagement                         |
|                                                   |                                                                      | Religious and inter-group harmony                  |

Source: Adapted from UN-Habitat (2014)

The movement of labour from semi-subsistence agriculture to more productive sectors of agriculture, manufacturing or services needs to sustain increases in overall productivity and standards of living. This holds true from a theoretical standpoint and the actual experiences of countries throughout their stages of development. Traditionally, the concept of structural transformation was framed in terms of a reallocation of economic activity in three broad sectors—agriculture, manufacturing and services – that accompany and facilitate economic growth and development (Duarte & Restuccia, 2010). ‘Africa’s growth miracle’, which started in about 2000, coincided with a period of intensified globalisation, with the largest developing country, China, coming to the fore and a boom in primary commodity prices into the global economy (African Economic Outlook, 2013; McMillan & Harttgen, 2014). It is beneficial to examine the recent process of structural transformation in Africa and its role in economic growth, and the allocation of factors of production for countries at different stages of development because structural transformation is integral to poverty alleviation in Africa (McMillan & Harttgen, 2014).

As the Mo Ibrahim Foundation (2013) explains, the drivers behind positive structural transformation are the quality of institutions, human capital accumulation, and the share of the labour force in agriculture. Multivariate analysis recently observed that, (1) ‘the improvement in the quality of governance leads to more

positive structural transformation’; (2) ‘human capital accumulation as measured by changes in primary school completion is positively correlated with structural transformation’; (3) ‘countries with a higher share of the labour force in agriculture are experiencing greater growth-enhancing structural transformation’ (Mo Ibrahim Foundation, 2013). Developing countries with the most rapid growth rates have typically reallocated the most labour into high productivity manufacturing, allowing aggregate productivity to catch up (Duarte & Restuccia, 2010). For instance, both in Asia and Africa structural transformation has been driven by increases in the share of employment in the manufacturing and service sectors. However, the difference between the two regions is that in Asia the share of employment in manufacturing is roughly double that in Africa (McMillan & Harttgen, 2014).

The importance of learning processes, capabilities and factor endowments suggests that building a strong primary sector (both agriculture and natural resource extraction) facilitates the structural transformation process. The primary sector can drive structural transformation through:

1. ‘Linkages with non-agricultural sectors and diversification into adjacent activities’;
2. ‘As a source of employment opportunity for a number of rural residents and as a source of potential demand for new non-agricultural products’;
3. ‘As a source of government revenue, which can then be important to invest in more productive sectors and pushing structural transformation’;
4. ‘As a source of FDI, it brings capital and technological know-how that serve as an indicator as to which sectors have potential returns’ (African Economic Outlook, 2013).

For structural transformation to be effective, Africa needs to focus on developing capabilities and domestic entrepreneurs in suitable business environments. Capabilities can be understood as a mix of specific technological knowledge and skills related to the quality of public services (infrastructure, education, health, etc.) and financial services, institutions, regulations and human capital capability. Macroeconomic and political stability are important factors to build the overall capability in the economy (Hausmann et al., 2011).

To summarise, transforming African economies from a low-income agrarian to high-income industrialised economies remains a major development challenge, and resides at the forefront of the development agenda. One of the key lessons is the need for a diversified economy that can create formal jobs and wealth, reduce poverty and inequality, use resource rents to enhance the well-being of the masses through public investment and enhance economic transformation. Structural transformation will also enable African countries to tolerate external shocks and improve their position in the global economy. Currently, most African countries have not yet transformed and diversified their economies due to different internal and external factors (see Table 3.7). Governments should play a central role in guiding and promoting economic diversification and transformation in a meaningful manner. It is therefore important for the state to be accountable and responsive to the needs of its population, and guide sustainable social and economic development. Free

markets and privatisation of public enterprises did not generate the required investment to expand output, exports and employment during the era of the SAPs; this served only to weaken the African states. Therefore, there is an urgent need for these states to develop capacity to design and implement policies to restructure their economies based on the alternative paradigm, which integrates the role of market and state.

**Table 3.7: Internal and external constraints for African transformation**

| Internal                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | External                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> <li>• Lack of context-specific development model and institutions</li> <li>• Macroeconomic instability due to poor policy, poor planning and implementation capacities</li> <li>• Weak institutional and human capacities</li> <li>• Limited public investment in soft and hard infrastructure and social sectors</li> <li>• Political instability and lack of democratic practices</li> <li>• Inefficient resource mobilisation and utilisation/management</li> <li>• Weak regional and multi/bilateral integration &amp; cooperation for development</li> </ul> | <ul style="list-style-type: none"> <li>▪ Limited policy space, once imposed from developed countries, based on different terms and conditions; i.e. attacked by the neoliberal ideology since the 1980s</li> <li>▪ Developmental partners overstate the importance of market-led approaches for development that block the view of alternatives approaches</li> <li>▪ Barriers to trade that undermine export revenue and constrain the export of manufactured goods</li> <li>▪ Disproportionate concentration of the Organisation of Development Assistant (ODA) in social sectors opposed to productive sectors</li> <li>▪ The concentration of FDI in extractive sectors with limited investment in value-added sectors</li> <li>▪ Climate change and its impact on infrastructure and livelihoods</li> </ul> |

#### **Possible solutions**

- Adopt a proper contextualised development ideology (a developmental state) and then design and operate coherent development policies and strategies, which can be complemented by nurturing strong state–society and state–private-sector coalitions that are vital to achieve the development policies and strategies.
- Build well-functioning and legitimate institutions and human capital (invest in people) - this is because states with robust, dynamic and flexible domestic institutions and well-equipped human resources achieve better economic growth and development.
- Mobilise and utilise their own domestic resources efficiently rather than looking for these from advanced countries or former colonial masters.
- Increase the role of both public and private sector investment to address infrastructure constraints, and priority should be given to labour-intensive production sectors to address unemployment, poverty and problems of inequality.
- Consolidate regional, multi- and bilateral integration/cooperation for mutual benefit in a win-win approach to maximise mutual benefit.

Source: Compiled by the author

### 3.5 Summary and synthesis

There is a strong desire to find an alternative development ideology by many African countries because of the failures of development ideologies adopted in the past since their independence. African economies need sustainable growth, removing dependency on the primary sector of the economy, and transformation from the current predatory (rent-seeking) political economy. They need to determine their point of departure and destination based on their own context, free from unnecessary external pressures. Africans need to determine their own agendas via widespread consultation among themselves. Considerable human and physical resources are necessary for development and much of these resources should be mobilised from the continent. Resources that are mobilised from outside through bilateral and multilateral relations should be free from any terms and tied-conditions that affect their internal affairs. Learning from the experiences of others, African governments should aim to modify their development strategies to meet their own development agendas. Genuine efforts of the states are essential to integrate the needs and interests of the poor segments of society into the development process, with pro-poor and pro-development policies and strategies.

The development approaches deployed to date in many African countries have been inadequate to satisfy their economic and social development agendas. They need to rethink the role of the state in Africa's economic transformation and accelerate the economic development process. The failure of earlier states or market-dominated development approaches has given rise to a search for another development approach. It is undoubtable that the developmental state paradigm, which accommodates the role of state and market for diversification and transformation, would be an alternative development model for many of the developing countries of Africa, as in the East Asian economies. Therefore, African states need to take into consideration some of the necessary common features of successful developmental states, the potential pitfalls of state intervention and the free-market model, the role of different stakeholders and other factors when practising/adopting the developmental state based on their own unique contexts.

The successful developmental states in Africa are those with the political will and the necessary capacity to articulate and implement policies to increase human capabilities, enhance equity and encourage sustainable economic and social transformation. Future growth and development depends on investment in human capital, physical infrastructure, the management of resource rents, and the efficient utilisation of their resource rents to diversify their economies. African countries will struggle to build the essential human capital and physical infrastructure through public investment, which is required to eradicate the widespread level of poverty and backwardness (Swilling, 2010). An educated population become agents/actors in the economy and producers of diversification and intensification, as well as consumers and innovators of modern technologies that facilitate the development process. Therefore, the emerging developmental states would need to focus on rebuilding and strengthening state capacity to expand human capability and promote an equitable and efficient allocation of resources. The expansion of innovative human capability is the

ultimate goal to attain sustainable development and transformation, and nurture far-reaching institutions at different levels to achieve an innovative development process.

It is clear that African political economies have been constrained by different internal and external factors (see Table 3.7), which have contributed to Africa remaining backward and poor continent. However, since more recently, scholars, African decision-makers and planners have been looking at and adopting alternative development ideologies (including the developmental state) to accelerate their development process by tackling these internal and external constraints head on. The hope is that if African nations can adopt the developmental state ideology wisely, based on their own contexts, they can generate strong and sustainable economic and social development, and thereby reduce their vulnerability to these internal and external constraints, improve the continent's position on the global stage, and improve the lives of millions that live in poverty.

To realise these and other development objectives, the existing predatory state or rent-seeking political economy needs to be transformed into a pragmatic developmental state model, which requires the establishment of institutions of pluralism (i.e. accommodating all stakeholders in the process). This means, promoting civic engagement and values through a dense network of horizontal associations/networks and eliminating vertical networks of patronage/clientelism. This enables the participation of many stakeholders [i.e. including all interested economic agents and social groups - public, private sector, farmers, urban residents and civil society] in the development process (Dia, 1996). Evidence shows that no political transformation is possible nowadays without the broad-based coalition/s that allowing the involvement of all the groups at different levels of society in the development process.

The question is how can a state ban such patronage and rent-seeking political economy in the initial stages of building a developmental state model? To tackle these challenges, states that adopted the developmental state model would need to establish a stable and broad-based developmental coalition/s accompanied by committed political leadership and a relatively autonomous state bureaucracy. One of the defining features of the developmental state is that it must be autonomous from the influence of the private sector, yet encourage its productive capacity by creating a fertile business environment (Evans, 1995). Evidence from the successful developmental states has confirmed that the private sector is the engine of development, and that these states have the capability to manage rent-seeking by means of the reward and punishment mechanism (the 'carrot' and 'stick') based on the performance of the private sector. This can be effective only if the relationship between the state and private sector is based on transparent rules and regulations. However, the coalition/s must not be hostile to the private sector – it should create a fertile business environment to accelerate the development process. The state however must be independent of the private sector's interests, influences so that it can punish the rent seekers, and reward the value creators.

The question is what would be the best coalition/s in the emerging African developmental states? Obviously, agriculture should be the engine to accelerate economic growth in African countries, which is what happened

when the developed world embarked on its development process. Although the contribution of agriculture to GDP has been declining in many African countries and the focus has been on the services sector, if due attention was paid to modernising and adding value to the agricultural sector, these countries could achieve their intended economic growth because they have the potential to do so. Widespread and relatively equitable ownership of resources (i.e. land, labour and agricultural inputs) and modern agricultural inputs are vital to accelerate the development of the agricultural sector and overall economic development. This would complement the diversification and intensification activities, and facilitate the transfer of resources from agriculture to non-agriculture (i.e. through strong backward and forward linkages) sectors, which, in turn, would incentivise farmers and domestic producers to boost their productivity.

Therefore, rural residents could potentially be the foundation of a stable, broad cross-section developmental coalition/s in many African countries. This is because majority of their population live in rural areas and are dependent on the primary sector of the economy (i.e. agriculture and its allied sectors). Agrarian reforms or agricultural land reform (i.e. agricultural land distribution) and other resource distribution to be considered as one way of eradicating rent-seeking political economy, though it is extremely difficult to do so in most African countries due to different historical problems. In general, agrarian reforms are required for African countries to become developmental states and to share the fruits/benefits of the developmental state by the majority. As a result, the situation in the rural areas would be considered conducive and permissible for building developmental states through formulating and implementing effective rural development programmes.

Equitable growth through assured fair resource distribution is considered as one of the important policy tools that have been adopted by most developmental states to restructure rural societies, reduce poverty and transform their economies (Kim, 2009; Van Donge et al., 2012). A developmental state is necessary for successful agrarian reform and the experiences of the East Asian developmental states bear this out. Agrarian reform comprises land and agricultural reform and has the potential to transform both national economies and the rural societies. An egalitarian distribution of resources was common to all successful East Asian economies; radical agricultural land reform was one of the crucial factors that contributed to egalitarian income distribution and rural transformation (Kim, 2009; Van Donge et al., 2012). Furthermore, the urban middle class and workforces could also become members of this developmental coalition/s. This is why the urban middle class and workforces would be expected to easily mobilise under the appropriate environment than the scattered rural population.

A developmental state would expect to create dynamic and rapidly transforming, market-conforming economies, if countries adopted policies based on their unique features, free from unnecessary external pressures. The emerging developmental state needs favourable internal and external environments to succeed. Currently, the external environment seems at least tolerant (if not totally conducive) of the emergence of a developmental state (i.e. for state intervention) because the recent global financial crisis

raised a debate about the reliability of the neoliberal model, not only for developing countries, but also for developed countries (Stiglitz, 2011).

To make the internal environment even more conducive to the emergence of a developmental state, African states should start looking inward to address their internal problems. They should not just sit back and wait for suggestions from external players, but should develop their own context-specific policies and strategies and decide on their own points of departure and destination. Then they can allow the external players to get involved based on their national plan rather one that is imposed. This indicated that countries need to insulate their domestic economies from being penetrated by extensive foreign capital this can be useful for the implementation of development project through technological upgrading and human capital development, freeing them from the cycle of a low growth economic trajectory and dependency on the foreign capital. However, this does not mean that African countries will not encounter challenges in building a developmental state. Some groups who benefit from the existing system will oppose the new development model. In addition, they will also face challenges from the developed countries and international organisations to sustain their national and organisational interests in a business as usual environment.

Consequently, whatever challenges countries face in practice, the developmental state (state intervention) is now seen as an alternative development model for developing countries to transform their economies, based on the right mix of the roles of the market and the state to address both market and state failures. Given the social pluralism (both ethnic and cultural) of African societies and the artificiality of national borders created during colonialism (i.e. their borders are conflict prone) the creation of developmental states can only be handled by adopting diverse institutions. These institutions should be based on the local context and be compatible with the interests of their constituencies rather than imported from the developed countries in the name of ‘good governance packages’/‘good standard institutions’.

To summarise, a number of countries on the continent have shown interest in establishing a developmental state to accelerate their development process (UNECA, 2011). This could have a ‘flying geese’ effect on the rest of the continent, as happened in the first and second-tiers of the East and South Asian developmental states consistent with the flying geese paradigm (Kasahara, 2013). The emerging developmental state could become a regional phenomenon through regional integration and Pan African efforts by the African Union. However, building a developmental state depends on the country’s specific context and the existence of political leadership commitment to changing the existing ‘predatory’ political economy. The ideology is not a ‘blue print’ and it cannot be universally adopted. It is a flexible, dynamic and pragmatic development ideology and it should be adopted based on the specific contexts of nation states. Developmental states exist in several forms, but all maintain the hegemony of value creation and are autonomous from the private sector, or interest groups, tackling rent-seeking, patronage and maintaining policy continuity for sufficient long-term success.



## CHAPTER FOUR: THE ROLE OF THE EMERGING DEVELOPMENTAL STATE IN ETHIOPIA

### 4.1 Introduction

For most of the twentieth century, Ethiopia was considered one of the most ‘starved’ and ‘conflict-prone’ countries in the world. The country was synonymous with famine, poverty, drought, deprivation and backwardness. From 1991 onwards, the state has tried to adopt an ideological that commits it to embarking on a transition from being a predatory and quasi-failed state to being a protective and developmental state (Negash, 2011; Nishi, 2013). It will be argued that Ethiopia has turned the corner in terms of social, political, and economic changes through development and reform policies that were articulated and implemented. Prior to this, during the 1980s, the economy was on a downward trend, with the average GDP growth rate of 2.3% and per-capita growth rate of –0.4%. The 1990s and early 2000s have registered relatively improved GDP growth rates, averaging 3.7%, and positive per-capita growth at 0.7% per annum (MoFED, 2002a). There is evidence that the current government, under the ruling party of the Ethiopian People’s Revolutionary Democratic Front (EPRDF in power since 1991), launched development policies and strategies that considered have big contribution to boosting economic development and to addressing the existing socio-economic problems of the country.

The country was in a dire political, social and economic situation when the current government took power from the socialist/military government. The country was suffering from a command economy that was isolated from the external economy. The new government’s first task was to design policies and strategies that would change the historical trajectory of the country. The priority was to achieve what the official ideology described as sustainable economic growth to escape from the existing extreme poverty by making agriculture the central focus of the development policy. This has been in place for the last two decades (Melke, 2013). There were two basic reasons for the government’s decision to focus its economic policy on agriculture. Firstly, most of the population lives in the rural areas. Secondly, a lack of capital (human, physical and financial) made it difficult to start up a capital-intensive industrial base (Nishi, 2013). The guiding principle was political stability and integrity of the state could be achieved by ensuring the political and economic rights of the nation to facilitate what is now regarded by the official government publications, some development agencies and certain academicians as the ‘miraculous’ economic development (Fourie, 2011; Teshome, 2012; Melke, 2013; Fantini, 2013; Africa Progress Report, 2014; Priewe, 2016).

Since the downfall of the socialist regime, the new government put in motion a series of policies and development interventions. It abolished the state-controlled economy, shifted towards a market-oriented economy, and opened the door for the private sector to play a considerable role in the economy (MoFED, 2002b). Given that the agriculture sector considered as the backbone of the Ethiopian economy and it unsurprisingly employs about 80% of the population and it remained as the dominant contributor to GDP (MoFED, 2006). To realise this state was tried to adopt the ‘Agricultural Development-Led Industrialisation

(ADLI)<sup>26</sup> policy’ as per the context of the Ethiopian economy; it was considered as a means to transform smallholder agriculture and kick-start the project and process of industrialisation. Government saw the ADLI development strategy as “an evolving strategy subject to pragmatic experimentation and ‘adjustments’ based on the learning-by-doing approach rather than an immutable approach (MoFED, 2002b).

The nature of the post-1991 development policy and consequent role of the state needs to be contextualized within Ethiopia’s unique history. It could be argued that compared to the rest of Africa, Ethiopia is an exception has never been colonized, has been the longest recorded history of ‘independence’ and has been shielded from the cold winds of metropole-directed global integration. The nation state in the rest of Africa has a *more* recent history, mostly stemming from the Berlin Conference of 1885 held at the height of the ‘scramble for Africa/for colonies’ and the post-colonial definition at independence. The colonial apportioning of the continent led to post-colonial states whose development prospects were significantly compromised by colonial constructs (Geda & Degefe, 2005; Geda, 2008). In the argument that follows, an attempt will be made to argue that Ethiopia is a developmental state. However, given its unique history, the Ethiopian developmental state emerged within specific conditions that may not exist in other African countries. Thus, the Ethiopian approach cannot be regarded as a model in simplistic terms for other African governments.

This chapter covers the historical background of the Ethiopian economy from the 1960s to the end of the twentieth century and discusses the emergence and progress of a developmental state model in the country. The specific objective in this chapter was to assess the role of the emerging developmental state in economic development and building context-specific institutions in the context of Ethiopia. Accordingly, the research questions addressed are:

- What conception of the developmental state has been incorporated into the Ethiopian state’s official development ideology, as reflected in both its official documents and the written perspectives of its key representatives?
- Is Ethiopia’s conception of the developmental state adequate for the context in the light of the international and African literature on the subject?

## **4.2 Background to Ethiopia’s political economy: An overview**

Unique among African/SSA countries, the ancient Ethiopian monarchy maintained its freedom from colonial rule. Modern Ethiopia emerged at the turn of the twentieth century under Emperor Menelik-II, who routed the Italian Invasion of 1896. Ethiopia has a long history of statehood; and present-day Ethiopia is linked to

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<sup>26</sup> The ADLI was planned as a phased development strategy starting in the agricultural sector, which would then offer inputs and create demands for the non-agricultural sector. Growth in the agricultural sector was expected to drive by yield increases using modern agricultural technologies. The ADLI aimed to bring structural transformation in the productivity of the smallholder agricultural sector and to streamline and reconstruct the manufacturing sector so that it could make extensive use of the country’s natural and human resources (MoFED, 2002b).

the territorial incorporation process of Emperor Menelik, who ruled the country from 1889 to 1913; and followed by the Emperor Haile Selassie (for about four decades) and the Socialist regime (for about two decades). However, almost all African states were designed/or built by Western colonial powers plus the artificial borders created by the coloniser, which caused internal mayhem, colossal collateral loss and unprecedented tragedy (Geda & Degefe, 2005; Geda, 2008; Fourie, 2011; Melke, 2013; Fantini, 2013).

The Ethiopian political economy was characterised by internal conflicts throughout the twentieth century. This means that Ethiopia's political economy was marked by internal conflicts, drastic policy changes and reversals, unlike other African countries linked with a history of colonisation. This is because Ethiopia had successfully resisted colonialism during the era of African scramble. These political processes influenced the behaviour of the economic agents. Ethiopia had little interaction with the global economy, and the country remained agrarian. The first half of the twentieth century witnessed three distinct regimes and each of these reorganised the country's economic, political and administrative policies, which resulted in significant economic, social, political and institutional instability. However, there were some signs of progress in Ethiopia at the turn of the twenty-first century but these were insignificant in terms of their impact on the livelihood of the population.

#### ***4.2.1 The imperial/monarchy regime (1930–1974)***

The Imperial regime lasted for more than four decades, and during this time, the landed aristocracy and peasants (tenants) constituted the major socio-economic agents. Land was an economically and politically contested resource, reflecting the antagonism between a landed aristocracy (including the church) and the peasantry. The control of land was invaluable to any economic agent that aspired to power (Geda & Degefe, 2005; Geda, 2008). This means that the political power of the regime was largely linked to the size and quality of the land that it owned, i.e. land was a key economic source and served as a base to consolidate political power for the ruling aristocracy at the apex. Most rural households were fundamentally tenants living under the ruthless conditions of the landlords.

During this period, there was an attempt to modernise the country through the expansion of modern schools and health facilities, infrastructure development under the endorsement of the first constitution, and the beginning of formulated medium-term development planning (Geda & Degefe, 2005). In terms of modernisation, the first comprehensive and integrated development plan appeared in 1957/58, which covered the period between 1957/58 and 1961/62. The main goals of the plan were to improve transportation, communication and construction, as well as agricultural development. Similarly, the second five-year plan (1962/63–1967/68) emphasised the development of the agricultural sector, but mostly the large-scale commercial farms and exports, and investment in infrastructure and mining. The last imperial or the third five-year plan was for 1968/69–1973/74 and it focused on the productive sectors of the economy such as manufacturing and agro-industry. This plan included two crucial objectives that showed the government's

commitment to expand the education sector and the emphasis placed on smallholder agriculture (Keller, 1988; Wubneh & Abate, 1998, cited in Balema, 2014).

However, the overall performance fell short of the targets envisaged by the consecutive five-year development plan. Moreover, their impact on changing the economic structure and development was insignificant. The agricultural sector, in particular, suffered from misguided policies that gave priority to large-scale commercial farm development and almost totally neglected smallholder peasant farming. Despite the great attention given to the industrial sector, its growth was slow and unsatisfactory. Coupled with the adverse impact of the feudal land-tenure system, the subsistence agricultural sector resulted in miserably low agricultural productivity, which declined throughout the regime. These conditions led to famine, starvation and the displacement of people from their homes in search of food. In addition, there was gross inequality in terms of wealth, power and privileges.

Thus, the country remained backward, begging for committed political leadership and pragmatic development policies and strategies for its renaissance. The backward subsistence agricultural practices were the result of an archaic land-tenure system, and a drought caused the agricultural output to remain stagnant. The archaic land tenure system was one of the main constraints to agricultural development and tenants were left with little incentive to adopt modern technologies to boost their productivity. It was obvious that a comprehensive land-reform programme was needed to increase output, employment, and income equality in the agricultural sector and among the rural residents (Chole & Manyazewal, 1992). These factors caused the collapse of the imperial regime and the emergence of the military regime — the country jumped from the feudal (Imperial) to the military regime dictatorship.

#### **4.2.2 The Derg/military regime (1974–1991)**

The Derg regime came to power after the collapse of the imperial regime in 1974, under the revolutionary slogan, ‘land to the tiller’ (*Meriet larashu* in Amharic). The Ethiopian working class, teachers, and students spearheaded the 1974 revolution, and an assortment of petty bourgeoisie elements overthrew the aristocratic feudal system of the imperial regime, who had ruled the country for more than four decades. In terms of ideology, the Derg adopted the socialist ideology or command economic system under the motto of ‘Ethiopia first’ (*Ethiopia tikdem* in Amharic) where market forces were deliberately repressed, and socialist policies of production and distribution process were vigorously pursued. The Derg regime emerged as an interest group and started to consolidate its power by setting up different institutions (peasant associations and cooperatives, marketing boards, a huge military force, a nationwide workers’ party, etc.) aimed at building a socialist state (control regime) with strong military power. The Derg imposed a control regime that implemented policies aimed at benefiting the socialised and penalising the private sector. The period witnessed deteriorating economic conditions and mounting discontent throughout the nation (Geda & Degefe, 2005; Geda, 2008).

One important characteristic of this regime was that it oversaw a complex land tenure system where the state and church maintained control over a majority of agricultural land. After 1974, the Derg government nationalized rural land, abolished tenancy, took state control of commercial farms, and redistributed lands. Numerous controls were also placed on the movement of agricultural goods and on agricultural prices during this period (Dorosh et al., 2011:3).

In 1975, the Derg implemented a relatively ‘radical project of land reform’ that entailed the nationalisation of all urban and rural land on the way to building a socialist state. In contrast, the Derg regime actively engaged in eliminating the role of the private sector in economic activity. Private ownership was legally prohibited and entrepreneurship was openly discouraged, which reduced economic activity in the private sector. Moreover, the Agricultural Marketing Corporation (AMC) forced peasants to supply their agricultural output to the government marketing board at fixed prices.<sup>27</sup> Furthermore, numerous controls were placed on the movement of agricultural outputs and on production quotas during this period (Geda, 2008).

However, the military government had no clear policies and strategies on how to develop the agricultural sector beyond the abolition of the old land-tenure system. Land reform alone could not result in significant additional wealth or resources for the poor peasants, even though it freed them from their proprietors’ (landlords) exploitation. The land reform was a redistributive and levelling reform; its strength laid not so much in giving rural communities increased resources and wealth as it did in presenting equal, if modest, opportunities for everyone (Dessalegn et al., 1998). When the issue of agricultural development policy became pressing, the government implemented the collectivisation policy, which was declared in 1978. This proclamation required peasants to organise themselves into service cooperatives, whose function was to market surpluses, purchase and distribute inputs, and run retail shops (Negarit Gazeta, 1978, cited in Balema, 2014). However, the agricultural sector suffered because of various misguided policies pursued by the military government. The policies discriminated against smallholder farmers, while favouring state farms and producer cooperatives; the state fixed low prices that depressed the income of farmers and curbed their purchasing ability for necessary farming inputs and other essential items. Furthermore, the agricultural surplus extraction policy was enforced through compulsory deliveries of grain quotas. Low prices of agricultural products and restricted market space were some of the causes for the deterioration of the sector (Kebede, 1992; EEA, 2000).

The overall trend of the economy during this socialist period shows decline and stagnation. Regarding terms of agricultural production, the rural income deteriorated and the rural population became destitute. The living conditions of the people also deteriorated during this 17-year period. For instance, the great drought of 1984/85 and the consequent famine affected nearly eight million people. It is estimated that one million may

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<sup>27</sup> The government established the AMC in 1976 aiming to stabilise producer and consumer prices, to ensure the timely and efficient supply of farm inputs, and to ensure adequate supplies for the public-distribution system. However, from its commencement, the AMC ensured that it extracted maximum surpluses for the government. Farmers had to sell a certain quota of their grain to the AMC at a fixed price; any surplus was sold in the market. There was a wide gap between the AMC’s farm-gate price and the actual market price. Consequently, it is hard to imagine that smallholder farmers would have more grain than the required quotas due to their low productivity and production.

have died from the famine, and thousands were displaced through the forced resettlement programme. Repeated famines left the rural population destitute and eroded their capacity to withstand any crisis (Chole & Manyazewal, 1992). In general, the period of the Derg regime witnessed a deteriorating economic structure, widespread discontent with the regime, strong resistance from rebel forces across the country, and external economic strangulation. This was compounded by military failure, especially in the northern part of the country. Consequently, the regime finally collapsed under the coalition of rebel forces known as the Ethiopian People's Revolutionary Democratic Front (EPRDF) in May 1991.

#### ***4.2.3 The EPRDF regime (from 1991 to the present)***

With the downfall of the Derg regime, the new government adopted more market-oriented 'Structural Adjustment Programmes' between 1991 and 2002 that were rationalised by leading representatives as necessary for economic transformation (Teshome, 2012; Balema, 2014; Oqubay, 2015). It abolished agricultural price controls and followed the ADLI development strategy, using a greater share of the nation's resource investments to increase agricultural productivity and boost growth linkages with the rest of the economy. The agriculture sector has become the leading sector in the economy because the majority of the population (84% in the 2007 census) resides in rural areas earning a livelihood from this sector. ADLI is the policy principle officially adopted by the Ethiopian government, to promote its national development (Ohno, 2009). The new government has tried to implement and engineer the market economy within the Ethiopian context, which meant not adopting a fully-fledged, free-market approach but introduced state intervention in the economy in terms of redressing the distributional implications of economic policies in the main economic sectors. As Geda (2005) indicates, economic growth in the first decade of the EPRDF government was quite impressive compared to growth under the Derg regime. Such good economic growth resulted from the adoption of favourable economic policies and strategies, complemented by peace and stability, which in turn created an environment that was conducive for the economy to grow positively.

Ethiopia managed to achieve respectable rates of economic growth in the last decade of the twentieth century under the EPRDF government. Close to 5%, average GDP growth was substantial when compared to the performance of other African countries. For instance, the average GDP growth rate for SSA and Africa was 2.1% and 2.4%, respectively, during the same period (World Bank, 2001). However, it was insufficient to resolve the multifaceted and deep-rooted problems of the country. Widespread poverty and other social complications<sup>28</sup> have been prevalent for decades and the situation prescribed rapid economic growth and

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<sup>28</sup> For instance, the health coverage of the country was 40% in 1995/96 and increased to about 60% in 2002/03. The primary school net enrolment rate was 36.6% in 1995/96 and increased to about 61% in 2002/03. The incidence of poverty was 49.5% (51.6% and 36.5% in rural and urban areas respectively) in 1995/96 has been declined to 41.9% (41.1% and 46.7% in rural and urban areas respectively, which the incidence of poverty increased in urban areas) in 2002/03. In 1995/96, the total road network was 23 thousand km and the road network reached 30.8 thousand km in 2002/03. In 1995/96, there were no Internet and mobile subscribers but in 2002/03, the number of Internet subscribers has reached around 9.5 thousand people. At the same time, the number of mobile subscribers was only about 51 thousand people between 1995/96 and 2002/03 (Statistical Abstract, various issues of CSA, cited in Teshome, 2012).



social transformation to address those widespread constraints. The EPRDF government adopted a universal land-reform programme and the Constitution guaranteed a decentralised system of land administration. Land and natural resources are the common property of the people of Ethiopia, and the law explicitly prohibits land sales and any other form of exchange such as mortgages. Farmers and pastoralists are entitled to land use rights free of charge for cultivation and grazing. The Constitution of the Federal Democratic Republic of Ethiopia (FDRE) article (40), sub-articles of (3, 4 and 5) affirms that:

The right to ownership of rural and urban land, as well as of all natural resources, is exclusively vested in the State and in the peoples of Ethiopia. Land is a common property of the Nations, Nationalities and Peoples of Ethiopia and shall not be subject to sale or to other means of exchange. Ethiopian peasants have a right to obtain land without payment and the protection against eviction from their possession. In addition, Ethiopian pastoralists have the right to free land for grazing and cultivation as well as the right not to be displaced from their own lands (FDRE, 1995:14).

Although there is mounting evidence of land grabbing in parts of Ethiopia in practice, the Constitution explicitly recognises that farmers cannot be deprived of these rights. By allowing both renting in and renting out of land, the use of the land is more liberalised and universal than it was during the Derg regime, and inheritance rights have strengthened. The state–society ownership of land reaffirmed the preservation of smallholder farmers’ land-use rights; however, smallholder farmers have not been allowed to ‘sell, exchange, or mortgage agricultural land’. According to official government ideology, this land-ownership system aimed to reaffirms (1) efficiency and productivity based on the idea of sustaining rural development, and agricultural growth requires an efficient system of land administration. (2) state–society ownership of land is required to strengthen household food self-sufficiency, and assure equity and fairness in term of resource distribution (Chinigò, 2014).



**Table 4.1: Summary of political events and economic policies of the regimes in Ethiopia**

|                                                                       | <b>Imperial regime (1930–1974)</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | <b>Derg regime (1974–1991)</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | <b>EPRDF regime (from 1991)</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|-----------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Major political events</b>                                         | <p>Conquered many southern regions and failed coup attempts in 1960.</p> <p>Insurgencies by the Eritrean Liberation Front</p> <p>Land tax bills opposed by aristocracy, reduced monarchy power base, and tried to make administrative change in the 1955 constitution.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | <p>There was an intense power struggle between 1974 and 1977. Within six months, the Derg state chief was killed. Mengistu came out as the Derg leader in 1977.</p> <p>Owing to civil strife, the Derg was forced to introduce a short-lived mixed economy in 1990. When Soviet support decreased in the late 1980s and the armed struggle was escalated by the EPRDF, the Derg regime eventually collapsed in 1991.</p>                                                                                                                                                                                                                                                                                                                                          | <p>Transitional government of Ethiopia embraced market-oriented economic policies and adopted SAPs.</p> <p>Eritrea became independent in 1993, and Ethiopia is a land-locked country, which has had a huge impact on the economic growth of the country.</p> <p>A new constitution was adopted in 1994 and the first multiparty election was held in 1995.</p> <p>War with Eritrea began in 1998 and lasted until 2000 and it remains in a no war and no peace situation).</p>                                                                                                                                                                                                                                                                                                                                               |
| <b>Broad economic policies</b>                                        | <p>Export promotion in the 1950s with elaborate incentive packages, including tax holidays to attract FDI.</p> <p>When the economic outcome from export promotion did not meet expectations, the monarchy adopted an import-substitution strategy in the 1960s with prohibitive taxes; import tax rates ranged from 5%–100%.</p>                                                                                                                                                                                                                                                                                                                                                                                                               | <p>Aligned with the Soviet and adopted all centrally planned economic policies.</p> <p>Tightly controlled foreign exchange and maintained a highly overvalued currency.</p> <p>Import tax rates ranged from 5% to 200%.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | <p>Emphasised agriculture as a priority sector with the adoption of the ADLI strategy and decentralisation was announced in 1992.</p> <p>The currency was devalued by more than 100% in 1993 (from 2.5 to 5.5 ETB/US\$), and further devaluated Ethiopia became a member of the COMESA in 1994 and harmonisation tariffs in line with the COMESA agreements in 2002.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>Agricultural sector policy (on land, input and output markets)</b> | <p>The land-tenure system was complex, ownership was skewed, and the state and the church maintained control over large shares of agricultural land</p> <p>Communal lands were non-transferable and private transfer of land was non-existent.</p> <p>The existence of large and privileged state farms; and farmer's rent as high as 50% of their produce.</p> <p>Prices determined by the market forces locally, but the import taxes were prohibitively high for selected import-competing commodities.</p> <p>Opposition to the land tenure system mobilised rural peasants and urban intellectuals with the popular slogan 'land to the tiller', this was one of the central forces that eventually brought down the monarchy in 1974</p> | <p>Land reform: nationalised private and church properties abolished tenancy and redistributed land.</p> <p>Ordered all commercial farms to remain under state control</p> <p>Distribution of agricultural inputs controlled by public enterprises, such as fertiliser import, and distribution and pricing controlled by government.</p> <p>Cooperatives favoured in terms of access to inputs.</p> <p>Enforced grain-production quotas, set prices of most commodities, and put restrictions on goods and labour movement across regions.</p> <p>Marketing controlled by the state-owned enterprises.</p> <p>Agricultural income-tax rate was progressive and as high as 89% and high taxation on exports of main crops as high as 100% of farm-gate price.</p> | <p>Agricultural-input market liberalised in 1992, while land remained public in the hands of the government (no sale or exchange, except lease and rent).</p> <p>A few types of inputs dominate Agricultural-input marketing; fertiliser and seeds are still dominated by the public sector.</p> <p>Maximum duty rate in 1993 reduced from 230% to 80%.</p> <p>Output-market liberalised and quota system lifted.</p> <p>Public marketing enterprise: Ethiopian Grain Trading Enterprise established in 1992 to intervene in agricultural markets to ensure price stability.</p> <p>Government cancelled all taxes levied on export of goods, including major export products, while a 5% sales tax was paid on selected agricultural products.</p> <p>The maximum tariff on imports was reduced to 50%, down from 230%.</p> |

Source: Compiled from Rashid et al. (2009)

#### ***4.2.4 Economic growth and the structure of the economy in the twentieth century***

Ethiopia suffered from internal political instability throughout the twentieth century up to the removal of the military regime. . Ethiopia has embraced several dominant ideologies and associated economic policies since the mid-1950s. In the last four decades of the twentieth century, the economy changed from a liberalised economy (during the imperial regime) to socialism or a controlled one (during the military regime) and then back to liberalisation again (under the EPRDF regime up to early 2000s). During the imperial and the Derg regimes, the country's development strategy was dependent on import-substitution industrialisation (ISI); the strategy focused on industry and almost neglected the agricultural sector, especially smallholder agriculture. Priority was given to industry in a context where the economy was still dependent on agriculture for its capital accumulation, food supply, raw materials, foreign-exchange generation, and market demand. However, the ISI strategy failed to produce high overall GDP growth rates and, instead, contributed to the slow growth of food and industrial output, foreign exchange and savings. The growth process of the economy was thus constrained by the limited attention given to agriculture (Dorosh et al., 2011). However, from the mid-1990s, the post-Derg regime made a radical shift from a policy of industry first to one of agriculture first, with a focus on smallholder agriculture, known as the ADLI development policy. The ADLI policy thus aimed to provide the macroeconomic policy framework for the development of successive, medium-term, five-year development plans for the country. The ADLI policy recognised the importance of improving rural infrastructure, social sectors and different institutions as key instruments to facilitate agriculture–industry (rural–urban) linkages (MoFED, 2002b).

Therefore, the overall growth recorded over the past four decades of the twentieth century was mixed and erratic because of the implementation of different policies and strategies by these different regimes. Most of the variables (see Table 4.2) indicate the dismal performance of the economy, the only positive being the level of inflation, which shows remarkable stability. This is largely attributed to price regulation in the pre-1991/92 period and to the good macroeconomic performance and positive weather out turn in much of the post-1991/92 period. Economic growth in Ethiopia is largely determined by the political economy, climatic risks, the strength and efficiency of institutions, the quality of public policies, and risks related to war and property rights (Geda & Degefe, 2005; Geda, 2008; Fourie, 2011; Teshome, 2012; Melke, 2013; Fantini, 2013; Chinigò, 2014).

**Table 4.2: Evolution of major macroeconomic aggregates (1961/62—1999/2000)**

| Indicators/periods            | 1961/62–<br>1966/67 | 1967/68–<br>1971/72 | 1972/73–<br>1976/77 | 1977/78–<br>1981/82 | 1982/83–<br>1986/87 | 1987/88–<br>1992/93 | 1993/94–<br>1999/2000 |
|-------------------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|-----------------------|
| Real GDP growth rate (in %)   | 4.7                 | 4                   | 1.3                 | 2.3                 | 3.7                 | –0.01               | 5.7                   |
| Investment as % of GDP        | 13.5                | 12.6                | 9.7                 | 11                  | 14.3                | 13.4                | 15.9                  |
| Saving as % of GDP            | 11.4                | 11                  | 9                   | 4.7                 | 6.5                 | 7.1                 | 5.3                   |
| Investment–saving gap         | 2.1                 | 3.6                 | 0.7                 | 6.3                 | 7.8                 | 6.3                 | 10.6                  |
| Export and import as % of GDP | 24.1                | 22.1                | 26.5                | 29.1                | 26                  | 20.2                | 37.8                  |
| Export as % of import         | 83.6                | 86.6                | 95.8                | 53.6                | 53.7                | 52.3                | 56.4                  |
| Inflation in %                | NA                  | 1.7                 | 11.4                | 10.7                | 3.4                 | 18.8                | 3.8                   |

Source: Adapted from MoFED (2002a)

Since 1960, economic growth rates have varied significantly both across and within each of the three regimes. During the imperial regime, as Table 4.3 indicates, although per-capita rates were negative over a few years, the overall growth rates in all three sectors were positive. Since 1961/62, until the collapse of the imperial regime in 1973/74, GDP grew on average at 3.7%, agriculture at 2.1%, and both industry and the service sectors at around 7%. The structure of the economy also changed a bit, i.e. the share of agriculture declined and the share of the industrial and service sectors increased. The share of agriculture in GDP declined from 76% in 1961/62 to 68% in 1973/74, and the share of both industry and services grew by 3% and 11%, respectively. Even though each regime has exerted some form of control over the sector, the Derg regime did more harm to the agricultural sector than the other two regimes. For instance, the regime controlled almost all aspects of the agricultural markets through set production quotas and agricultural output prices, and empowered state enterprises to control practically all aspects of the agricultural markets (EEA, 2000).

**Table 4.3: Sectoral growth and share in GDP 1961/62–2001/02 (in %)**

| Periods/<br>sector | 1961/62–1973/74 |               | 1974/75–1990/91 |               | 1991/92–2001/02 |               |
|--------------------|-----------------|---------------|-----------------|---------------|-----------------|---------------|
|                    | Growth<br>rates | Shares in GDP | Growth<br>rate  | Shares in GDP | Growth<br>rate  | Shares in GDP |
| Real GDP           | 3.7             | 100           | 2.3             | 100           | 4.6             | 100           |
| Agriculture        | 2.1             | 68            | 0.6             | 56            | 2.3             | 47            |
| Industry           | 7               | 9             | 3.6             | 11            | 5.3             | 11            |
| Services           | 7.3             | 23            | 3.8             | 33            | 6.9             | 42            |

Source: Adapted from Rashid et al. (2009)

Hence, the agricultural sector on average registered a little more than half a percentage point growth. In contrast, between 1991/92 and 2001/02, the country achieved an overall GDP growth of 4.6% per year, agricultural growth of 2.3%, industrial growth of 5.3%, and services growth of almost 7%. The share of agriculture in the total economy declined from 56% in 1991/92 to about 47% in 2001/02 (see Table 4.3). Relative growth in agriculture has taken place since the early 1990s, mostly driven by the expansion and intensification of crop areas, and the promotion of labour productivity through investment in basic education and health. Furthermore, strong emphasis has been given to extension services, the supply of fertiliser and rural credit provision to boost agricultural intensification and land productivity.

### 4.3 Theoretical background to the ADLI as a development policy

Development economists, and particularly agricultural economists, have focused on the contribution of the agriculture sector to overall economic growth in general and rural development in particular. The role of agriculture in development related to its important linkages: (1) it provides labour for industrial workforces, produces food surplus for an increasing population with higher incomes. (2) It boosts the level of saving for investment in the economy; it enlarges market for industrial outputs. (3) It provides export earnings to pay for imported capital goods, and it produces raw materials for agro-processing industries (Vogel, 1994; Mellor, 1995; Delgado et al., 1998; Mellor & Dorosh, 2009). Some economists highlighted that agriculture's productivity and institutional linkages with the rest of the economy produced demand incentives (rural-household consumer demand) and supply incentives (agricultural products with small price rises) that promote modernisation as well as transformation (Vogel, 1994).

A strong performing agricultural sector is fundamental for overall economic growth in most of developing countries, which have a potential like Ethiopia. Improving agricultural performance generates income in both rural and urban areas due to both direct and indirect spill-over effects of the sector. As agricultural income increases, farm households save more and spend more, stimulating growth and investments in other sectors of the economy. Furthermore, agriculture provides tax revenues and supplies a wide range of raw materials to domestic, agro-processing manufacturing industries (Stringer & Pingali, 2004; Ohno, 2009). A strategy

that involves the prioritisation of the agricultural sector, designed to promote the overall economic and social changes, is referred to as the ADLI development strategy (Ohno, 2009); and has been discussed under different names by various scholars using similar terms (Mellor, 1995). The major essence of the strategy lies in shifting a greater share of the nation's limited resources to the agricultural sector to increase agricultural productivity and production by promoting technological innovation and adoption (Mellor, 1995; Ohno, 2009).

In developing countries, like Ethiopia, the agricultural sector intended to have strong production and institutional linkages with the rest of the economy in general and with the domestic agro-processing industries in particular. Stimulating the productivity of the agriculture sector, and creating strong demand and supply incentives could help to foster the domestic industrial sector. The ADLI development strategy attempts to steer a low-income economy towards a more equitable and self-sustaining growth path, if they give proper emphasis on productivity, income and consumption demand linkages (Vogel, 1994). Under the ADLI development strategy, the first priority is given to accelerate the growth of the agricultural sector by providing modern farming practices, encouraging investment in soil and water conservation/natural resource conservation, boosting both small-scale and medium-scale irrigation schemes, and expanding the supply of a trained/skilled labour force (i.e. skilled extension workers) to assist small-scale farmers. The second priority is to facilitate the expansion of domestic industry related to agro-processing, mainly through investment in basic infrastructure such as transport, communication, water, energy and others. The third priority is to expand and diversify exports to cover the expenses of growing capital-intensive imports (Mellor, 1995). A high rate of agricultural growth has far-reaching positive implications for the overall economic growth of developing countries in terms of increasing employment and accelerating poverty reduction (Mellor & Dorosh, 2009).

The ADLI development strategy is a national development strategy focused on agriculture as the leading sector, and developing industry with a strong emphasis on agriculture–industry forward and backward linkages. It aims to accomplish the goal of industrialisation by expanding the internal demand for intermediate and consumer goods by domestic industries. This, however, is dependent on ensure the linkage effects of agriculture with the industrial sector because a prosperous farming sector requires, in theory, a large volume of inputs from the industrial sector. The question is whether this in fact materialised in practice. Furthermore, additional agricultural incomes are supposed to be spent on industrial consumer goods providing further investment in the economy. On the other hand, increased demand from industrial expansion, in turn, is supposed to provide an expanding market for agricultural products. The objective of the ADLI development strategy is to strengthen the linkages between agriculture and the industry by increasing the productivity of the farm households, expanding medium- and large-scale private commercial farms and by allowing expanding domestic industries (particularly agro-processing industries).

The strategy is simultaneously considered as a growth programme, an industrialisation programme, an employment programme (since agriculture is considerably is labour intensive), and an income-distribution

programme (Mellor, 1995; Mellor & Dorosh, 2009). The ADLI development strategy consists of building a domestic mass-consumption market by improving the productivity of the agricultural sector and letting farmers share the fruits. It focuses on improving the productivity of small and medium-scale agriculture through the formulation of an appropriate rural-development programme, which is critical for its success. In practice, small and medium-scale agriculture has strong linkage effects with the domestic industry and benefits the majority more than large-scale agriculture, which depends on a mechanised farming system.

To implement the ADLI development strategy in a successful manner to improve the productivity of the agricultural and allied sectors; it requires improving the physical and institutional infrastructure of the rural areas to transform the agricultural sector. In Southeast Asia, for instance, the primary requisite is water control, such as increasing irrigation, improving the management, maintenance and redesign of the existing irrigation systems, and investing in tube-wells and hand pumps, all of which play a significant role in increasing productivity of the agricultural sector (Vogel, 1994; Stringer & Pingali, 2004). Other practical steps include constructing rural roads, natural conservation, technological improvements (for intensification and diversification), and credit supply for smallholder farmers by expanding microfinance institutions and credit cooperatives. Furthermore, the development of marketing institutions (both input and output markets) and other agricultural-support institutions (extension services, agricultural research institutions, farmer training centres and farmer cooperative associations) are crucial for the diffusion of good practices and adoption of new knowledge (Vogel, 1994; Stringer & Pingali, 2004; Mellor, 1995; Mellor & Dorosh, 2009).

The state plays a crucial role in the diffusion of modern agricultural technologies and in institutional arrangements. The ADLI development strategy encompasses mainly smallholder farmers whose resources and capabilities are extremely limited. Furthermore, the state invests in the agricultural sector, such as in transport, energy, communication, R&D, education, health and input supply systems. It also encourages and promotes governmental agencies to provide export promotion, agricultural-extension services, rural credit and advisory services to maximise the benefits of the farm households (Mellor, 1995). The successful implementation of the ADLI development strategy depends on the political commitment of the leadership and the specific country's economic, social and political environment. The ADLI development strategy is recognised as the main development strategy in Ethiopia where 80% of the population livelihoods directly depend on this sector (Ohno, 2009) and its approach may be relevant to other developing countries with similar contexts. Furthermore, the ADLI development strategy seems most promising for developing countries with potentially large domestic markets and an already existing domestic industrial base provided they adapt the strategy to their own contexts (Mellor, 1995). The ADLI strategy demands high public investment in the agricultural sector and continual increases in public spending. In line with this, the government of Ethiopia has been allocating a high proportion of public resources to the agricultural and allied sectors through its pro-poor spending strategy.

#### 4.4 The emergence of a developmental state model in Ethiopia

The policy makers or political elites of the ruling party in Ethiopia accepted that the so-called free-market-led development approach would not address all the market failures and development problems. Zenawi, the late Prime Minister of the country, argued that the neo-liberal paradigm is a dead end and incapable of bringing about the African renaissance in general and the Ethiopia renaissance in particular. Hence, he insisted a fundamental shift to a new paradigm (rather than a marginal adjustment of the existing one) and the need for African states in general and Ethiopia in particular to move towards becoming developmental states. As a result, Ethiopia changed its development paradigm after evaluating the effect of the Structural Adjustment Programme (SAP) between 1991/92 and 2002/03 (Zenawi, 2006). As discussed in chapter two, historical processes in certain countries have shown that state intervention has been critical in the development process of the developing countries. Zenawi accepted this view of development, which is why he generally accepted that no nation achieves successful economic development without state intervention. For instance, development success in many of the East Asian countries confirms that the role of state intervention in economic development remains crucial (Zenawi, 2006).

In contrast, as indicated in chapter two, the development path of Africa has mainly been attributed to the dominance of economic liberalism in global development discourses with the main objective to reduce significantly the role and capacity of the state in the economy. Many scholars argue that SAP may have aggravated the deterioration of human security in many African countries. Many of African states experienced negative policy outcomes such as de-industrialisation, low foreign direct investment, and poor economic growth, high levels of poverty, low level of per capita income, low HDI and enhanced dependency on donors/ex-colonies (Mabasa and Mqolomba; 2016). Obviously, Ethiopia also did not free from all these shortcomings resulted from SAP. In essence, the argument is SAP did not work in developing countries like Ethiopia. Hence, Zenawi and the political elites of the ruling party were influenced by the literature as well as by good practices on the East Asian developmental states. They decided to adopt it as a model, and indigenize it to Ethiopian conditions, i.e. the explanation for the emergence of developmental state is twofold: that SAP did not deliver the goods, and ideological learning from elsewhere could be indispensable to address all the development ills observed in Ethiopia.

Chapter 2 reviewed the literature on the developmental state that essentially argues that a state could be considered as a vanguard of development by addressing market failures and supporting the indigenous private sector for capital formation and transformation to accelerate the economic development process. The state in developing countries, like Ethiopia, is one of the crucial institutions to fulfil the basic needs of the public in the areas of education, health, agriculture, water and other basic development requirements, which have not been fully provided by the market. Accordingly, influenced by this very same literature, the top political elites of the ruling party recognised that the neo-liberal paradigm failed to uproot the rent-seeking system because it denied the role of state as a driver for economic development. The political elites tried to



understand the naïve view of ‘market is good, government is bad’ which promoted a minimalist state could not be an appropriate alternative model to Ethiopia (Ohno, 2009).

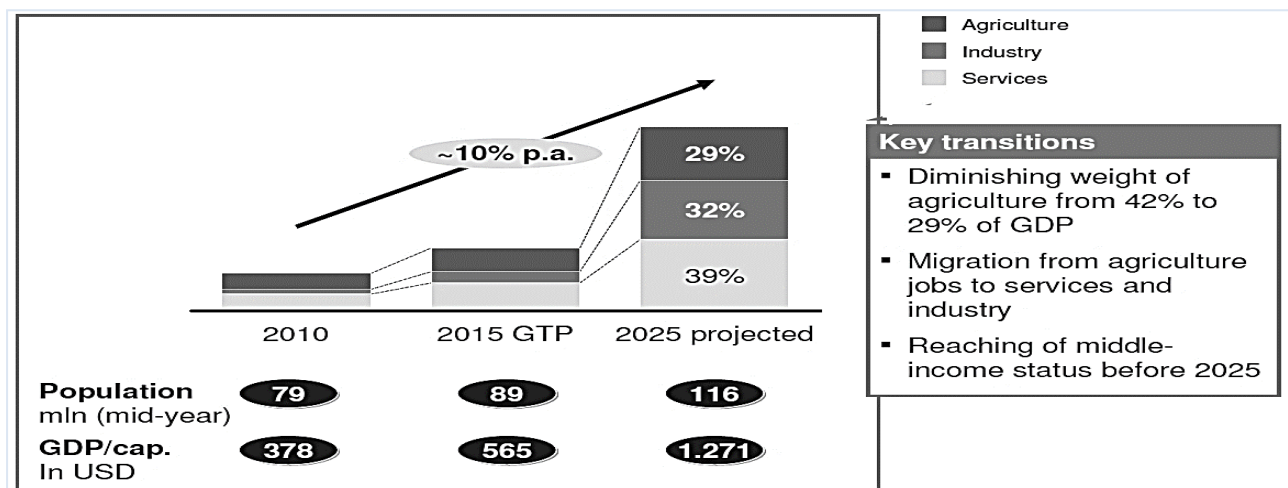
As a result, the Ethiopian Government changed its development paradigm after seriously evaluating the effects of SAP after almost a decade (i.e. between 1991/92 and 2002/03). The role of government in the economy has increased to create conducive business environment to all economic actors/agents to contribute their effort in the development process of the country (Zenawi, 2006; Teshome, 2012; Fourie, 2011; Fantini, 2013). After searching an alternative development path, in the early 2000s the ruling party officially committed itself to the developmental state ideology to transform the economy and enable the country to join the middle-income country club within a specific period (Ohno, 2009; Fourie, 2011; Fantini, 2013). It customised the ideology in accordance with its unique political, economic, social and cultural context by considering to bring structural change by prioritising and modernising the agriculture sector, and moving towards industrialisation (Bekele & Regassa, 2012). Significantly, this ideological shift, which Ethiopia envisages, is inconsistent with the traditional political and economic conditionalities of the Western donors. In contrast, it shares commonalities with the development strategies of East Asia countries although they are not the same and quite different in context (Ohno, 2009; Fourie, 2011; Fantini, 2013).

The government aims to stimulate economic growth primarily by increasing public investment in key infrastructure and the social-services sectors in an inclusive approach. In its Foreign Affairs and National Security Policy and Strategy document the government acknowledged that a “lack of democratisation, poverty, and backwardness are threats to the national survival of the Ethiopian statehood system. There can be no doubt that the attainment of speedy economic development, democratisation, and peace is fundamental to the survival of the country, which finds itself in a state of abject poverty and backwardness” (Ministry of Information, 2002:1). Furthermore, the policy document identified ‘national humiliation and shame of poverty and backwardness’ as the principal threat to national security, and rapid development as the necessary response (Ministry of Information 2002). This indicates that poverty and backwardness are perceived to be the core problems of the economy (i.e. they are the source of all other socio-economic problems); and alleviation of them has been placed at the forefront of government policy. Provision of social-sector development programmes like education, health and others are seen as critical to address these core development problems of the country (Ohno, 2009, Negash, 2011). That means a direct and explicit social policy focusing on eradicating poverty proposed by government as a ladder to strengthening economic growth and social cohesion. More specifically, the recent five-year medium-term GTP articulated the country’s vision as follows: “to become a country where democratic rule, good-governance and social justice reign , upon the involvement and free will of its peoples, and once extricating itself from poverty to reach the level of a middle-income economy as of 2020-2023” (MoFED, 2010:21). Besides the democratic values embedded in the overall vision, the GTP further explicates the vision on poverty alleviation by giving specifics on the aspects of the economic vision. It says that Ethiopia’s vision of economic sector specifically includes:

building an economy, which has a modern and productive agricultural sector with enhanced technology and an industrial sector that plays a leading role in the economy, sustaining economic development, securing social justice and increasing per capita income of the citizens so as to reach the level of those in middle-income countries (MoFED, 2010:21).

The explicitly stated emphasis on economic development and the clarity of goals, such as eradication of poverty and pushing the economy into a middle-income status by a definite date, indicates the developmentalist orientation of the contemporary Ethiopian state. Therefore, it can be argued that the Ethiopian state already has an ideological orientation that is similar to the ideological orientation of the developmental states that were regarded as a model by the political elite who needed an alternative to the SAP (Bekele & Regassa, 2011).

**Figure 4.1: Long-term targets: Transition of the Ethiopian economy into middle-income**



Source: Adapted from MoFED (2010)

The Ethiopian developmental state declared war on poverty and backwardness and its strategy focused on reducing and eventually eradicating it (Ministry of Information, 2002; Negash, 2011). Since Ethiopia adopted the developmental state ideology accompanied by pro-poor and anti-poverty policies and strategies, it has registered relatively high economic growth over the last decade. Such encouraging economic growth has resulted from considerable investments of public resources across a number of key infrastructure and socio-economic sectors (Negash, 2011; Teshome, 2012, MoFED, 2014; UNDP, 2015; World Bank, 2016). For instance, its growth in per capita income was remarkable at about 6.1% for the period, compared to 5% and 4.8% for Rwanda and Mozambique respectively (Priewe, 2016). This continuous economic growth for more than a decade is even more surprising, since it occurred in one of the poorest countries in the world and since the policies applied differ substantially from mainstream thinking in the tradition of the Washington Consensus (Priewe, 2016). For instance, as different institutions agreed that the level of poverty was reduced to less than 30% in 2011 from a high of about 58% in 1995 and life expectancy also significantly rose to about 63 years (CSA, 2012; UNDP, 2015).

The Africa Progress Report states that this reduction was achieved through broad-based economic growth with agriculture making a major contribution, coupled to more equitable spending and the promotion of labour-intensive manufacturing (Africa Progress Report, 2014). This indicates that the political leadership and society reached almost in a consensus on the common agenda of the country, namely addressing ‘poverty and backwardness’, and then showing their commitment to overcoming it by exerting the required efforts at different levels (Ministry of Information, 2002; MoFED, 2010). The country’s capacity to address poverty, backwardness and other socio-economic ills is, therefore, dependent on the performance of the agricultural sector because the sector supports about 80% of the rural livelihoods (Fourie, 2011, Fantini, 2013).

Ethiopia adopted this development model after the ruling elites examined the practices of the developmental paths of the East Asian countries and the large-scale global reaction to the failure of the neoliberal model in the developing world, particularly in Africa (Fourie, 2011; Fantini, 2013). It modelled its development project on the industrialisation experiences of the East Asian countries in the 1960s and 1970s, with Japan, South Korea, Taiwan and, more recently, China often being mentioned as examples (Fourie, 2011; Fantini, 2013). This indicated that the political elites or decision makers’ drew lessons from one or more countries, but were conscious of the need to apply this to their own political system (Fourie, 2011). The academic literature agrees that although it is desirable that countries learn from the experiences of others, it is essential that implementation must accord with conditions in their own specific contexts because just copying models without contextualising them can create problems. Accordingly, Ethiopia seems to have learnt lessons from experiences of many countries rather than following a particular model (Fourie, 2011; Fantini, 2013; Kebede, 2015). Even though these East Asian developmental states were authoritarian, they did develop their economies in a specific period. However, the Ethiopian developmental state is complemented by a system of political and fiscal decentralisation since the country approved its constitution in 1994/95. In addition, the developmental state adapted in Ethiopia tried to take into consideration the exceptionalism (like cultural, religious, multi-ethnicity, economic ways of life, independence from colonialism and others issues) of the country.

Although much on the developmental state has been demonstrated on the East Asian Tigers, the Ethiopian developmental state tried to include further elements of democratic participation (included among which periodic electoral democracy, popular participation in the development and governance process, state driven socio-economic development and broad-based coalition), consensus building and cooperation within social partners (Ohno, 2009). The concept of ‘democratic participation’ and ‘embedded autonomy’ introduced by Evans (1995) highlights the centrality of cooperation, negotiation and consensus building around the developmental agenda. Here it need to take into consideration all these are not a sufficient condition for limiting authoritarianism, rather they are a necessary precondition for preventing the centralisation of power which can often reinforce authoritarian tendencies. Hence, following political decentralisation, fiscal

decentralisation<sup>29</sup> was implemented in two phases. The first phase of decentralisation covered the period 1995/96-2002/03 (where responsibilities were devolved from federal to regional level). During this phase, the lower tiers of government (the *woredas*) did not have the power to decide on how much of their budgets to allocate across sectors leaving this power completely to the regional states. Understanding this shortcoming, the government pushed fiscal decentralisation down to *woreda* level. Therefore, the second phase of decentralisation was undertaken since 2002/03 (responsibilities were further devolved from regional to *woreda* level). As a result, it is evident that public service delivery in education, health, roads and others sectors has improved substantially at village level (UNDP, 2015). Although there is an emerging consensus within the political elites and increasingly broader layers of society that a developmental state model is central to accelerating economic growth and social transformation, this does not mean that the officially claimed model does not face criticisms from intellectuals and other stakeholders (FDRE, 2011; Balema, 2014). Though the adoption of the developmental state ideology and related policies has had positive effects, there are debates, which not everything worked as intended, and new contradictions arise as a result. For instance, some of them strongly questioned whether the current Ethiopia is really a developmental state by highlighting the persistence of deep-rooted poverty in the country. Others agreed with the developmental state ideology of the country, but strongly doubtful whether the developmental state of Ethiopia is democratic by fingering abuse of power by government officials and ignorance of basic democratic values such as freedom of press by the ruling party. Hence, more than a decade after the ruling party has officially claimed the developmental state model; there is still fierce debate and disagreement continuing on such basic issues: What is a developmental state? Is developmental state relevant to Ethiopia? What type of developmental state should Ethiopia follow? Which country should be a model for Ethiopia to learn from; and so on (Jebena, 2015).

Ethiopia has adopted some of the policy innovations from the East Asian developmental states, particularly South Korea and Taiwan to accelerate its economic development through mobilising the existing resources. Therefore, the last decade (since the developmental state model officially claimed) has been considered as a period of vigorous policy learning and experimentation for Ethiopia (Fourie, 2011; Fantini, 2013; Balema, 2014). Unlike South Korea and Taiwan, Ethiopia is a multi-ethnic nation, which it took into consideration, implementing democratic reforms, including decentralisation of power to village level, recognising freedoms and rights, and inviting widespread participation of the people; i.e. ranging from periodic elections to taking part in their local affairs (Balema, 2014). The policy-makers/the political elites claimed the developmental state model via paid due attention to the good practices from East Asia but tried to adapt them to the unique context of the country (Fourie, 2011; Fantini, 2013; Kebede, 2015). Achieving economic development, following the logic of these claims, would necessarily (though not sufficiently) help to facilitate the process

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<sup>29</sup> A system of fiscal decentralization transfers funds for the provision of basic services in health, education, agriculture, and local infrastructure to local governments based on formulas applied at the federal and regional levels. A region's level of development is a primary element of those formulas, with less developed regions receiving higher per capita transfer levels than more developed regions (Khan et al. 2014).

of democratisation. However, building a democratic developmental state is not an easy task in Ethiopia because it is characterised by multi-ethnicity and diverse economic and political interests. This is why these claims need to be critically evaluated. As argued in chapter two building a capable, credible and committed developmental state is vital to accelerate the development process of a nation (Daddi, 2013; Melke, 2013). All of this has put Ethiopia on the path to achieving its primary goals of enhancing economic growth and transformation, and reducing levels of poverty (Balema, 2014).

However, there are different challenges and the possibility that some of the criticisms or challenges are valid as a result of anti-government protest observed in parts of Ethiopia. To mention some of the observed challenges are, first, lack of politically neutral and professionally competent state bureaucracy. This implies lack of ‘embedded autonomy’ of state bureaucracy due to excess interferences of the ruling party on the state bureaucracy. Second, the existence of widespread corruption and rent-seeking practices in both the public and private sectors and a lack of good governance add to the concerns about the accountability and transparency of the political leadership. The state has failed to contain the corruption and rent-seeking behaviour/practices that is overrunning the state apparatus at an alarming pace. As a result, many relevant development projects have not been implemented adequately on time and the policy outcomes have been negatively affected (Asayehgn, 2012). Third, the creation of job opportunities, especially for the educated youth, unequal growth between urban and rural areas (for instance, poverty is high rural areas than the urban areas) are remaining a serious challenges for the Ethiopian Economy (CSA, 2011). Fourth, the observed social inequalities, high unemployment rates in both the urban and rural areas and abject poverty that continuing as the major challenges of the Ethiopian economy and have been considered as the major causes of the recent anti-government public protest After the ruling party officially claimed the model. The Ethiopian state had an ideological framework for justifying/ designing and the articulating its long-term socio-economic development strategies and programmes. These policies and strategies geared towards the priority agenda of reducing multidimensional poverty, which was expected to have a positive spill-over effect on the overall development process. Under this priority agenda, the state has employed several socio-economic policy instruments to tackle productivity and production challenges in the agricultural sector. The agricultural-led development strategy is seen as further helping to boost the infrastructure and social services of the rural population and is considered as the cornerstone for the structural transformation of the Ethiopian economy. The expansion of basic infrastructure is regarded as having the potential to facilitate the linkage between the urban and rural economies. Accordingly, massive public infrastructure investment has been at the center of the country’s economic strategy in order to address historic infrastructure deficits and provide the conditions needed for subsequent economic growth (Teshome, 2012; Fantini, 2013; World Bank, 2016). This integrated public investment is intended to enhance infrastructure development and reduce

unemployment challenges in the economy. For instance, in the urban areas, the state promotes micro and small enterprises (MSEs) development to address unemployment problems in the urban areas.<sup>30</sup>

Though it might therefore be inflated, the official government source confirmed that MSEs created temporary and permanent employment opportunities for about 3.96 million citizens throughout the country in 2010/11- 2012/13. This has contributed to the decline of urban unemployment rate from 18% in 2010/11 to 16% in 2012/13 (MoFED, 2014). MSEs are integrated in the construction of new public universities, sugar industries, integrated housing development, rural road construction under URRAP programme and railway networking and construction, power generation, as well as cobblestone (urban road construction) (UN-Habitat, 2014). The industrial extension and financial supports accorded to MSEs have helped some to grow. In 2012/13 fiscal year alone, 1775 enterprises graduated/up graded from MSEs to medium scale enterprises (MoFED, 2014). Although this was a good attempt by the government, there are many shortcomings in practice from both the government and the beneficiary sides. Some of them are giving a priority opportunity to politically affiliated groups, lack of implementation capacity, lack of skills (low level of productivity and competitiveness of the enterprises), lack of enough market opportunities and timeous credit supply are a few them (Asayehgn, 2012; Jebena, 2015).

In addition to the expansion of infrastructure, the state also focuses on human capital development, which is critical for technological and entrepreneurial capacity accumulation. Investments in social sectors (in education and health services) have expanded and the human-resource development indicators have improved. For instance, the Human Development Index of the country has improved from 0.350 (i.e. inequality-adjusted HDI is 0.349) in 2004/05 to 0.461 (inequality-adjusted HDI is 0.459) in 2012/13 (UNDP, 2015). This shows an average human development loss of 0.5% per annum due to inequalities in health, and access to education and income. Thus, although this is an encouraging trend, the country still falls within the Low Human Development category; but if the current growth in HDI is sustained, it could attain the Medium Human Development category by 2025. These efforts by the state have enhanced the well-being of the nation, freeing millions of poor Ethiopians from the intergenerational cycle of poverty, and improving the life expectancy of the nation (CSA, 2012; Teshome, 2012; UNDP, 2015).

Furthermore, the state recognises the role of the private sector as an engine of economic growth in the development process and continues to formulate policies and strategies to ensure the competitiveness of the emerging private sector to play a vital role in the development process (FDRE, 2012; Fantini, 2013; MoFED, 2014). The state's current high investment in infrastructure development and improvement in service delivery has given rise to numerous opportunities and created an enabling environment for the active

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<sup>30</sup> Ethiopia's development strategy is geared towards pro-poor economic and social development. Pro-poor economic growth over the last decade has led to a considerable increase in per-capita GDP and an impressive decline in the national poverty rate. Further, the sustained and robust economic growth has helped to alleviate unemployment problems. For instance, overall unemployment in urban areas dropped to 16% in 2013 from 20.4% in 2009 though unemployment remains high (IMF, 2014).



participation of economic agents (including the private sectors) in the economy (Fantini, 2013; World Bank, 2013b). Without a well-developed infrastructure and service delivery system, the involvement of the private sector would be unthinkable because of the profit motives of this sector. Since the lack of infrastructure resulted in high transaction costs for the private sector, the state was the only institution that could invest in the physical infrastructure, and provide direct credit to strategic industries and protection to infant industries at the initial stage of industrialisation until they are able to compete into the free-market on their own (UN-Habitat, 2014).

Despite these inspiring achievements in the economy yet, the democratic system of the country still needs further institutionalisation. It is obvious that people who live in poverty and backwardness, lack the capability and time to practise their rights and responsibilities (Rahmato et al., 2008; Balema, 2014). Regardless of the existing challenges, it is possible that the process of strengthening democracy does go hand in hand with poverty eradication and development endeavours. Only through significant economic growth can democracy and economic development be further enhanced and consolidated, and their interrelation and interdependence be sustained and strengthened. Democracy in Ethiopia is not an option; rather it is the only means of survival as a united country (Balema, 2014). This is because Ethiopia is a country of more than eighty ethnic groups differing in language and culture and today democracy is considered as one of the basic components human right. In the case of Ethiopia, therefore, it is not possible to postpone democracy as a trade-off of economic growth; rather it is must regardless of the pace of its success (Teshome, 2012; Kebede, 2015).

#### ***4.4.1 The ADLI development strategy in Ethiopia***

Ethiopia has potentially a productive labour force in the younger generation, and has considered a potential wealth of natural resources for economic growth and development. The percentage of the population who are considering economically active in Ethiopia was about 60% in 2014/15 (UNDP, 2015). This indicates Ethiopia's demographic transition is taking place faster than in comparison to the rest of developing African countries. However, the rapidly rising working-age (economically active) population has its opportunities and challenges (Teshome, 2012; World Bank, 2016). Because most of the population lives in the rural areas, bringing structural transformation to the rural economy is the primary challenge of the claimed 'developmental state' (Negash, 2011). In Ethiopia, smallholder agriculture was neglected for most of the twentieth century, and food production/supply did not match the population growth/demand. The current government tried to understand the deep-rooted problems of the economy as being structural and requiring a long-term policy and strategy to resolve them. The ADLI development strategy was adopted, taking agriculture as its point of departure and as the growth engine of the economy. Further, it considered by the policy makers to paved the way for the adoption of specific sectoral policies and strategies. The ADLI development strategy has seen by government as 'an evolving development strategy subject to pragmatic experimentation and adjustment' based on the 'learning-by-doing' approach, rather than on an immutable approach (MoFED, 2002b).



As a result, the government perceived the ADLI development strategy “to stimulate a broad-based growth path, addressing poverty and food insecurity and obviating the need for specific forms of social protection, pro-poor growth outcome for Ethiopia would not be achieved through a collection of ad hoc and targeted programs of the safety net variety. A pro-poor outcome results from a pro-poor strategy” (MoFED 2002b:28). Therefore, the rationality behind the ADLI developmental strategy is to bring structural transformation<sup>31</sup> (i.e. within the agriculture sector itself by increasing the productivity of smallholder agriculture), and to modernise and reconstruct the manufacturing sub-sector (i.e. transform from the agricultural sector to industrial and its allied sectors) through wide backward and forward linkages (Chinigò, 2014).

The rural development policies and strategies of the FDRE attempted to address the existing constraints and create conducive conditions for the transformation of the rural economy. These strategies include promoting labour-intensive agricultural development and the maximum usage of the land for enhanced benefit, the continuous improvement of agricultural practices, devising appropriate direction to target different agro-ecological zones, and pursuing a development path that is integrated with other sectors of the economy.<sup>32</sup> The policy advocates the need for popular participation in designing local development plans and programmes, and the improvement of overall governance to enhance the sense of ‘belonging’ and the conviction that would motivate the implementation of these policies. These policies and strategies could transform the rural sector from subsistence farming to a diversified and commercialised one with strong links to the urban sector, but the outcome will depend on the success of the implementation capacity of the state. In turn, the implementation capacity also depends on the ability of the leadership to tirelessly motivate the rural population, continuously build upon achievements and review processes, directions and initiatives (MoFED, 2002b).

The ADLI development strategy was practised as ‘Core ADLI’ (from the early 1990s to the early 2000s) and as ‘Enhanced ADLI’ since the early 2000s (Ohno, 2009). Primarily, the ADLI strategy has targeted smallholder farms to achieve rapid growth in agricultural productivity and production, increase income for rural households, attain national food self-sufficiency at both household and national levels, and produce a

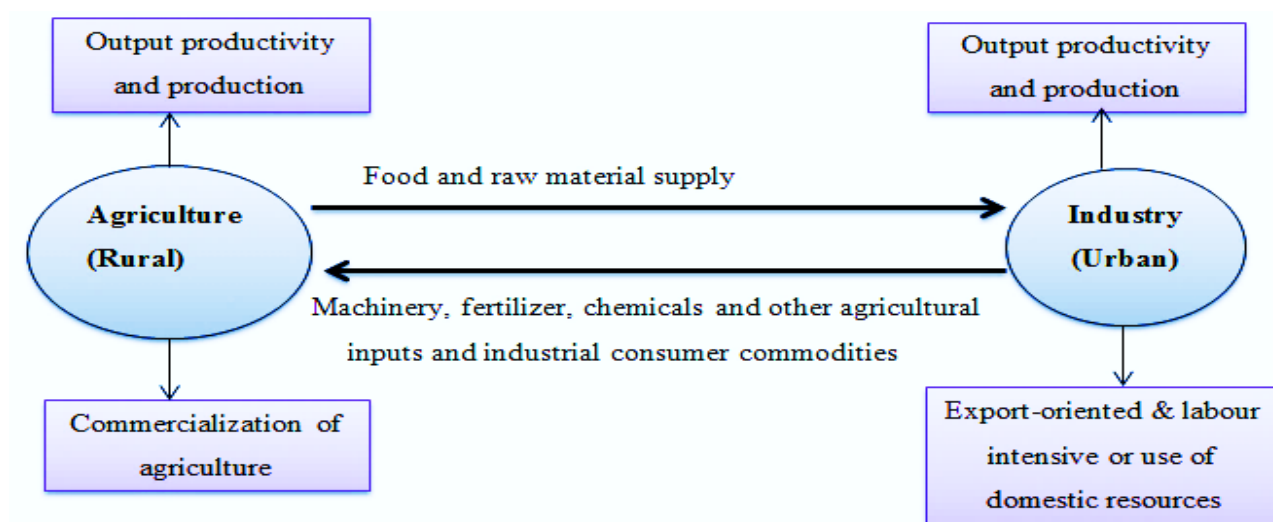
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<sup>31</sup> Structural transformation assumes the reallocation of economic resources away from the least productive sectors of the economy to more productive ones. It is the rise of new productive activities and the reallocation of resources, typically from agriculture to industry and modern services, leading to higher economy-wide productivity and progressively raising incomes (McMillan & Rodrik, 2012). For most developing countries, like Ethiopia, usually it is shifting labour from subsistence agriculture to commercial agriculture, manufacturing and modern services. Structural transformation is considered as critical prerequisite for economic and social development in a given economy. It plays an instrumental role in sustaining economic growth, generating productive employment and raising standards of living (Martins, 2014). Structural transformation is driven by the need to transform the economy and to translate the rapid economic growth into sustained and inclusive growth through economic diversification that creates productive jobs, reduces poverty and inequality, and enhances access to basic services.

<sup>32</sup> Rural transformation could not be achieved without the expansion and development of infrastructure, both in the rural and urban areas. The expansion and improvement of education and health services, rural road and transport services, safe drinking water, credit and extension services, rural electrification and communication and other essential services are critical for rural development and transformation.

surplus, which could be marketed to the urban residents and domestic industrial sectors (MoFED, 2002b). Smallholder agriculture has been considered as playing a vital role in boosting growth, reducing poverty and ensuring food security, alongside medium- and large-scale agriculture. Smallholder farmers typically produce staple food consumed by the household and cash crops to generate an income (Africa Progress Report, 2014). The government tried to provide modern agricultural technologies and better farming practices, improved seeds, fertilisers, irrigation, rural roads, extension and marketing services to the smallholder farmers (MoFED, 2002b).

**Figure 4.2: Linkage of input-output in Core ADLI**



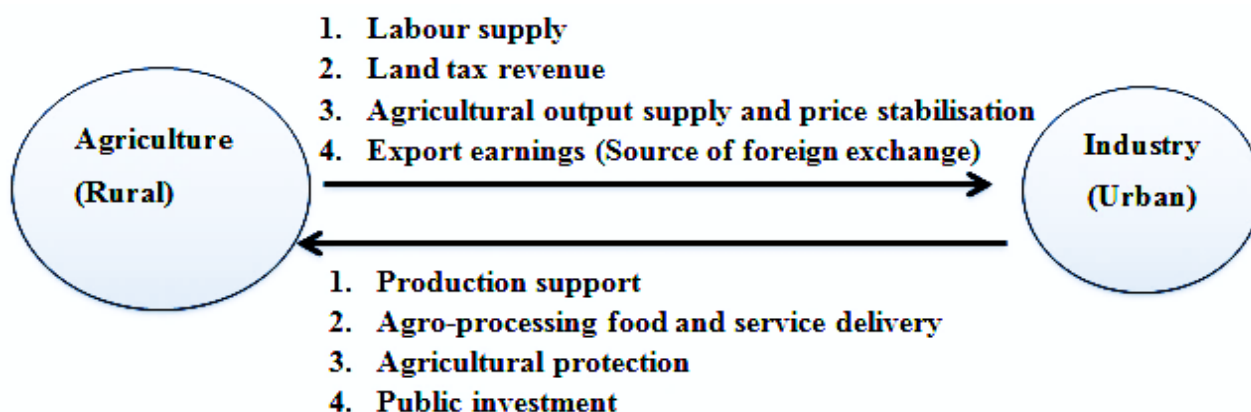
Source: Adapted from Ohno (2009)

An increase in agricultural output is expected to stimulate domestic industrial production by providing food and industrial materials/inputs. In turn, the industrial sector could also produce inputs into agriculture such as fertilisers, farming tools and equipment, as well as consumer goods for rural households. This dynamic linkage is intended to support the first stage of industrialisation (aimed to focus on the light industries and agro-processing) until the economy moves into a higher level of economic development and industrialisation. As Figure 4.2 indicates, this kind of direct forward and backward input—output linkage between the two sectors is referred to as ‘Core ADLI’ (Ohno, 2009). For instance, the implementation of ‘Core ADLI’ is clearly observed in the leather industry, where domestic animal hides and skins are supplied to tanneries and manufacturers to produce finished leather or final products, such as leather jackets and shoes for domestic sales and export (MoFED, 2002b; Ohno, 2009). However, its impact may not be large enough to lead and sustain overall industrialisation process of the country. This indicates that ‘Core ADLI’ is possible, but that alone may not be enough for achieving a desired high economic growth, or industrialisation (Ohno, 2009). On the other hand, in the ‘Enhanced ADLI’<sup>33</sup> strong emphasis is placed on growth

<sup>33</sup> The Enhanced ADLI operates in the agricultural sector and can offer surplus labour, agricultural-land tax revenue, cheap food and foreign exchange and export earnings for the promotion of industrialisation. In turn, the urban industrial

acceleration, which supposed to be achieved through commercialisation of the smallholder agriculture and private sector development. In the enhanced ADLI policy targets are not limited to smallholder farmers in rural areas, but include large-scale commercial agriculture (including horticultural farms), urban micro and small producers, and medium- and large-scale manufacturers (MoFED, 2006; Ohno, 2009). These all resulted in the review of Ethiopia's industrial policy in line with the ADLI long-term development policy and strategy. Politically, expansion of the policy's scope to encompass urban producers is understood as the state's response to include them in the officially claimed 'developmental state' model (Ohno, 2009).

**Figure 4.3: Resource transfer between agriculture and domestic industry (Enhanced ADLI)**



Source: Adapted from Ohno (2009)

Summary of the main points from Figure 4.3:

- 'Production linkages', whereby increases in agricultural output lead to increase supply of inputs used in non-agricultural production, or increase demand for non-agricultural outputs used in the agricultural production sector;
- 'Consumption linkage', whereby increases in agricultural income lead to an increase in the demand for non-agricultural consumption goods;
- 'As agricultural productivity grows, the supply of semi-skilled and skilled labour to the non-agricultural sector will increase'. This means that the investment of agricultural surplus income in children's education will ultimately increase the supply of skilled labour to the other sectors.

This shows that agriculture is the sector from which growth should emanate, and growth in agriculture will lead to industrial growth by offering skilled and semi-skilled labour inputs, and a demand for its products. The ADLI development strategy acknowledged that agricultural-sector development is not an exogenous process; it must be sustained because it adds value through its interaction with other sectors in the economy. Generally, the ADLI development strategy is integrated with all the other sector strategies, with agriculture

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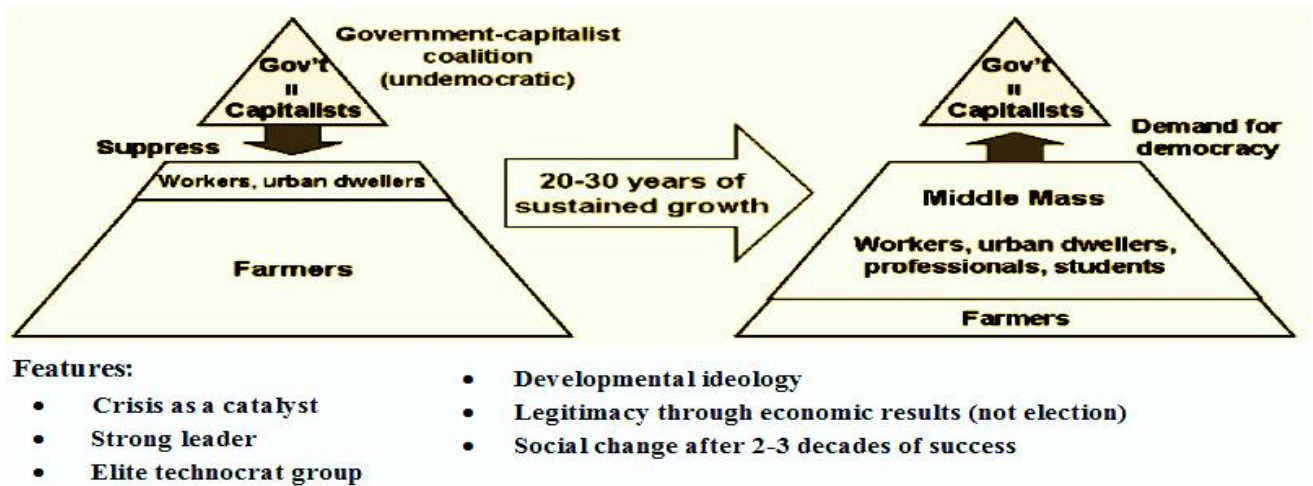
sector can transfer resources and technologies through production support, food and service delivery, agricultural protection and public investment (cf. MoFED, 2002b; Ohno, 2009).

at the forefront. The transformation of agriculture was expected to trigger a structural transformation in the economy. Substantial expansion of the agriculture sector would reduce and ultimately eradicate poverty from the rural areas. Furthermore, it would have the same effect in the urban centres through its significant spill-over effect, as agricultural growth would encourage growth in the manufacturing and service sectors. This implies, the ADLI strategy considered as an engine of economic growth by achieving initial industrialization through strong input-output linkage between agriculture and industry. It is difficult to find such an example of economic take-off in East Asia developmental states rather Ethiopia tried to realise its economic growth in such mechanism (Ohno, 2009).

#### ***4.4.2 The developmental state and the ADLI development strategy***

Formulating and implementing development policies and strategies are related directly or indirectly to the political situation of a given country. The developmental failure of most African countries resulted not only from the technical shortcomings of economic policy, but also from political factors such as a lack of committed political leadership and the will to promote the national development agenda. A consistent political regime with a vision of national development should be put in place before the formulation of concrete policies and strategies. Adopting a developmental state paradigm may create suitable conditions for the emergence of such a political regime that could build effective institutions, policies, and incentive systems to stimulate domestic value creation and economic rent distribution.

By adopting a ‘developmental state’ model and formulating a long-term, workable development strategy, Ethiopia intends to radically transform the existing political economy from a system in which rent-seeking is the dominant behavioural pattern to one in which value creation is central. The main objective to transform the political economy to enable more equitable sharing of the national cake and ensure long-term stability and sustainable development (Ohno, 2009). A state led by strong and committed political leaders could strengthen the role of all economic agents, such as farmers, workers, merchants, entrepreneurs and foreign firms, and force them to consolidate their value-creation behavioural patterns through incentive (‘carrots’) and disincentive (‘sticks’) mechanisms. For instance, smallholder farmers are the most important partners in the political coalition in the Ethiopian developmental state (see Figure 4.4). Even with the smallholder farmers, the state offers top-down guidance for the improvement of productivity through various ‘carrots’, and responds to their voices through policy formulation in a ‘bottom-up’ fashion.

**Figure 4.4: East Asian developmental state model**

Source: Adapted from Ohno (2009)

However, the East Asian developmental states formed a political coalition with capitalists (i.e. with the business sector as per the context of their respective countries) instead of smallholder farmers. The East Asian developmental states, therefore, are often seen to be based on a narrow but vibrant coalition between the state and capitalists (Evans, 1995). In contrast, in Ethiopia, capitalists (both local and foreign enterprises) are not seen as main players in the political coalition of the developmental state. Although they are very important strategic partners in the development process of the country, the state does not intend to rely on them for votes or funding. Instead, the state looks at capitalists as a subject for policy-making, supporting their value-creation while punishing their rent-seeking practices; there is conditional cooperation at arm's length (Ohno, 2009).

In Ethiopia, the relationship between smallholder farmers and the developmental state is the most significant and broad-based coalition. Smallholder farmers account for about 80% of the population and are the support base of the ruling party (Ohno, 2009). This is similar in Botswana, where the democratic developmental state built a broad-based political coalition with cattle owners. This broad-based coalition is coincided with Peter Evans' argument that a broader incorporation of social groups is both possible and desirable in the emergence of the new developmental state in the twenty-first century. This state-society coalition must be derived from democratically organised public deliberation from the bottom up (Evans, 2010), but considerable infrastructural and institutional abilities are required to create and sustain such broad-based developmental coalition (Mkandawire, 2010). Therefore, the twenty-first-century developmental state must promote the capabilities of its citizenry through the provision of collective public goods such as health and education (Evans, 2011).

The minimum condition for smallholder farmers to accept the political coalition is the perception that the state will not suppress them or drive them into despair. A greater incentive would be the receipt of both conditional and unconditional support to improve their livelihood, such as famine relief, food aid, food for



work, education and health services, as well as other social-security packages (Ohno, 2009). For instance, the developmental state in Ethiopia introduced the PSNP,<sup>34</sup> one of the conditional social security programmes targeting to the most drought prone areas that among others made major contributions to public works as well as the prevention of environmental degradation (Thorbecke, 2014). Furthermore, the government tried to provide productive assistance in agricultural technology such as fertiliser, seeds, irrigation, and rural-credit services through the expansion of rural financial institutions. The farm households supposed to increase their productivity and agricultural income through using these agricultural inputs and encouraged to become producers of cash crops (Ohno, 2009). In Ethiopia, all these agricultural inputs are provided to most the smallholder farmers with the objective to increase their productivity and production under the rural development programmes. For instance, agricultural extension services have been greatly strengthened in the last decade by assigning three agricultural extension workers and establishing farmers' training centres (FTCs) throughout the rural areas/villages.

**Figure 4.5: Ethiopian 'democratic developmental state' model**



Source: Adapted from Ohno (2009)

Over the last decade, the productivity and production of smallholder farmers have improved because of implemented reliable rural development policy via putting the agricultural sector at the forefront of the development policy (Ohno, 2009). The policy aims to increase agricultural productivity to raise overall production and to invest in those industries, which have production or input linkages to the rural economy (agriculture). For instance, budgetary allocations for the agricultural sector are among the highest in Africa; for instance, Ethiopia has considered large agricultural extension workforce that directly support to the smallholder farmers at village level (World Bank, 2016). Another motivation factor for farmers to increase

<sup>34</sup> Productive Safety Net Programme (PSNP) is one successful social security programme in Ethiopia that consists of three components: 'Public works' that builds community infrastructure (for instance, a large-scale network of rural road and other physical infrastructure) and agricultural-related assets (soil and water conservation and irrigation can help to improve farm productivity and production). 'Direct support' that provides social assistance to the poor and to those who are unable to participate in the public-works programme. 'Household assets building programme' which empowers rural households to increase their income, food production and asset holding, i.e. assets security and new household asset formation (cf. Thorbecke, 2014). Therefore, the PSNP is one of the largest social protection intervention programmes in Ethiopia to achieve food security at household level.

their productivity and production was the agricultural land reform,<sup>35</sup> which took place in the late-1990s and gave constitutional guarantees for the ultimate land-use right (Ohno, 2009). According to Joseph Stiglitz (1996), analysis on ‘Some lessons from the East Asian miracle’, land reform has three economic effects: (1) ‘Increased rural productivity and income, which resulted in increased savings.’ (2) ‘Higher incomes created the domestic demand that is important in these economies before the expansion of export markets.’ (3) ‘The redistribution of income contributed to political stability, an important factor in creating a good environment for domestic and foreign investment’. The development direction in Ethiopia is looks almost similar with the East Asian countries, i.e. transformation out of agriculture is the main development direction. By increasing productivity and production, the state shows its commitment to creating reliable transformation from the bottom; i.e. by creating capital from the rural sector/economy. To realise this, Ethiopia pursued the farmers’ movement known as ‘developmental army building’ (*‘Yelimat serawit ginbata’* in Amharic) in main development fronts such as in agriculture, education and health to boost the role of the community in local development programmes (Fantini, 2013). This is one of the new micro-institutions below village level to rationalise rural development interventions, input distribution and experience sharing on their farming practices. Furthermore, they are also compelled to participate into communal or development works, contributing in labour, cash or kind to the construction of public infrastructures like roads, schools or health posts (Fantini, 2013).

#### 4.5 The role of a developmental state in development

Many international organisations, including the World Bank and IMF, have reported the achievements in economic growth and poverty reduction in Ethiopia. As UNECA (2011) depicts, Ethiopia is one of the success stories and is praised by many international organisations and donors as a model for the whole continent. This implies (directly or indirectly) that they have given credit to the role of the developmental state model, i.e. the role of state intervention. For instance, the IMF stated that Ethiopia has been one of the fastest-growing economies in Africa, having registered a double-digit GDP growth rate for the last decade (IMF, 2013). Its economic performance is impressive for a non-oil-producing country and it is rated as one of the fastest growing economies in the SSA region (FAO-WFP, 2012; World Bank, 2012; African Economic Outlook, 2012; IMF, 2013; Africa Progress Report, 2014). Ethiopia’s growth prospect remains robust and sustainable, reinforced by sound macroeconomic management, and committed high-level political leadership, massive investment in infrastructure and human capital development (World Bank, 2013b).

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<sup>35</sup> Most East Asian and Southeast Asian countries underwent some form of land-reform redistribution early in their history so that they started with a relatively egalitarian land distribution that greatly facilitated the subsequent growth of agricultural output and the transfer of the agricultural surplus to non-agricultural sectors (Kuznets, 1988; Erik & Henry, 2004). Land reform was viewed as a significant part of an environment that provided economic freedom to small-scale farmers, which was vital to the economic success of South Asian development states. This indicates that agricultural policies and land reform are a sufficient condition for a developmental state to emerge and bring socio-economic change to the broad mass of the rural population (Van Donge et al., 2012).



Furthermore, the latest acknowledgment came from US President Barack Obama at the end of September 2014 at the bilateral talks with Ethiopia's high-level official delegation during the 69<sup>th</sup> United Nations General Assembly. Obama, in his talk with the Ethiopian leaders, acknowledged the tremendous development leaps the country has achieved. He said that:

When I spoke previously at the African summit about some of the bright spots and progress that we are seeing in Africa, I think there is no better example than what has been happening in Ethiopia, one of the fastest growing economies in the world. We have seen enormous progress in a country that once had great difficulty feeding itself. The president further stated Ethiopia is now not only leading the pack in terms of agricultural production in the region, but will soon be an exporter, potentially not just of agriculture, but also power because of the development that has been taking place there (25 September 2014).

What makes the Ethiopian economic growth different is that it is not dependent on the extraction of natural resources such as crude oil or minerals, like other African countries that have such resources (Fantini, 2013; Africa Progress Report, 2014; Priewe, 2016). Ethiopia is one of a few SSA countries, which grew to a remarkable extent out of subsistence agriculture with the combination of public investment without special natural resource endowments. A key ingredient for this unique economic growth is the practice of the idea of a developmental state by the Ethiopian government or followed state-led development approach, which guided successful East Asian countries to a sustained high growth trajectory (Fantini, 2013; Priewe, 2016). This means that economic progress is not coming from natural-resource rents but from massive investments in agriculture, infrastructure, and the development of social sectors (like education, health...). In Ethiopia, the agricultural sector has a huge potential to grow, which will infuse further strength to the overall economy (Fantini, 2013; IMF, 2013; World Bank, 2013b; Africa Progress Report, 2014; Priewe, 2016). Nevertheless, such situation is not unique only for Ethiopia because there are other economies around the world including many of the East Asian developmental states that have grown without natural resource extraction. Ethiopia has registered a robust average GDP growth rate of 10.6% since it officially adopted the 'developmental state' model. This is above the required estimated growth rate of 7% to achieve the MDG of halving poverty by 2015. Furthermore, it is above both the East African average (7.6%) and the SSA average (5%) (Nganwa, 2013). Despite some discrepancy over the figures between the international institutions and the government of Ethiopia, there is a consensus that Ethiopia has registered sustained economic growth over the past decade. The country has also met most of the MDGs and, consequently, will soon join the middle-income group.

However, Ethiopia has one of the lowest shares of industry and manufacturing in GDP in the SSA region. The manufacturing sector is typically associated with structural transformation, and productivity gains remain relatively small compared to other SSA countries (Martins, 2014). As Table 4.4 shows, the structure of the economy has changed from a predominantly agricultural economy to a relatively predominantly service economy, although agriculture remains critical for broad-based growth and the government continues to give it priority. The economy is not diversified enough into the manufacturing sub-sector; agriculture and the service sectors each contribute about 40% and more than 40% to GDP respectively, and about 80% of employment is still concentrated on the agriculture sector. This shows that the source of growth has

gradually shifted from agriculture to the service sector because much of the domestic private sector (assumed as the engine of growth) is engaged in the service sector. Even though the service and agriculture sectors have been the main drivers of structural transformation over the last decade, the manufacturing sector has made a relative contribution to the economy since recent times. The private sector is now motivated to engage in the manufacturing sub-sector due to different investment incentives provided by the government and the expansion of the basic infrastructure (such as road, power, telecom, railways, airlines and other basic services). Public investment is the main source for the expansion of the basic infrastructure to create a viable environment for the involvement of the private sector in the productive sectors of the economy.

**Table 4.4: Average GDP growth rate and sectoral share to GDP in Ethiopian economy (in %)**

| Years/<br>indicators                  | 2003<br>/04 | 2004<br>/05 | 2005<br>/06 | 2006<br>/07 | 2007<br>/08 | 2008<br>/09 | 2009<br>/10 | 2010<br>/11 | 2011<br>/12 | 2012<br>/13 | 2013/<br>14 | 2014/<br>15 |
|---------------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| SSA                                   | 7.1         | 6.2         | 6.4         | 7.1         | 5.6         | 2.8         | 5.3         | 5.2         | 5.3         | 5.2         | 5.4         | -           |
| Real GDP                              | 11.7        | 12.6        | 11.5        | 11.8        | 11.6        | 10          | 10.6        | 11.4        | 8.8         | 9.9         | 10.6        | 10.2        |
| Agriculture                           | 16.9        | 13.5        | 10.9        | 9.4         | 7.5         | 6.4         | 7.6         | 9           | 4.9         | 7.1         | 5.4         | 6.4         |
| Industry                              | 11.6        | 9.4         | 10.2        | 9.5         | 10          | 9.9         | 10.8        | 15          | 17.1        | 18.5        | 21.2        | 21.8        |
| Service                               | 6.3         | 12.8        | 13.3        | 15.3        | 16          | 14          | 13.2        | 12.5        | 11.1        | 9.9         | 11.9        | 10.0        |
| <b>% share of sector to total GDP</b> |             |             |             |             |             |             |             |             |             |             |             |             |
| Agriculture                           | 46.7        | 47          | 46.7        | 45.9        | 44.6        | 43          | 42          | 41          | 43.1        | 42          | 40.2        | 38          |
| Industry                              | 13.9        | 13.5        | 13.3        | 13.3        | 13.1        | 13          | 13          | 13.4        | 11.5        | 13          | 14.3        | 15.6        |
| Service                               | 39.4        | 39.5        | 40          | 40.8        | 42.3        | 44          | 45          | 46          | 45.4        | 45          | 46.2        | 46.4        |

Source: Compiled from IMF for SSA, MoFED, NBE, CSA and World Bank

From building a road network to expanding basic social services and making a big push in the energy sector, public investment is considered as the engine of growth in the economy. Ethiopia is spending about 20% of its GDP to reengineer its infrastructure, such as roads, schools, health institutions, railways, air transport, hydroelectric and irrigation dams, and telecommunication services (Asayehgn, 2012). The quality and availability of the growing infrastructure through extensive public investment are essential for overall sustainable growth. For instance, in the energy sub-sector, the construction of the Grand Ethiopian Renaissance Dam (*Talaku Yehidasie Gidb* in Amharic, see Box 4.1), which is being built in Benishangul-Gumuz regional state of Ethiopia, approximately 500km northwest of the capital Addis Ababa on the Blue Nile River as part of the ‘green economy development strategy’ of the country.<sup>36</sup> It is self-funded hydropower project (i.e. being built with the finance entirely mobilise from domestic sources) indicative of

<sup>36</sup> Greening the economy or green economy strategy is not a new concept, but rather a re-emerging issue that has gained in recent years increasing prominence within international and respective countries’ development policy debate. The ‘green growth’ discourse leaves the free-market (neoliberal) paradigm assumptions in place and focuses on policy change, emphasising the role of markets and state to augment the existing technological opportunities for improving scarce resource efficiency (Death, 2014).

the country's rebirth and on its completion it will be the biggest hydropower project in Africa that will generate above 6000MW electricity (Oqubay, 2015; Yihdego, Khalil & Salem, 2017). This demonstrates that the state is looking committed to tapping into its vast endowment of natural resources and renewable-energy potentials. Although constraints on the availability of finance and lack of skilled human/technical capabilities to tapping the existing potentials are acknowledged, hydropower, wind, solar and geothermal energy are potentially available resources in Ethiopia. These will deliver electricity with minimum greenhouse gas (GHG) emissions and will help Ethiopia to achieve its green economy development strategy, i.e. building a green economy and climate-resilience strategies (FDRE, 2011).

#### **Box 4.1: An overview of the GERD: benefits and impacts**

Hydroelectric dams are increasingly popular in water rich countries of SSA, especially those less endowed with oil resource. The Nile River (Blue and White Nile), which is one of an international rivers as its water resources have shared by eleven countries. The Nile River's drainage basin covers 3,254,555km<sup>2</sup>, forming approximately, 10% of the total area of the continent of Africa and it is 6,853km long, and, thus, it is one of the longest river in the world (Yihdego, Khalil & Salem, 2017). Ethiopia has long claimed a right to use Nile water, but it was only in 2011 that the government of Ethiopia announced that country would begin construction of a large dam on the Blue Nile River, near its border with Sudan. The GERD, which is one of the largest dams in the Africa continent, will impound the Blue Nile River in the Benishangul-Gumuz region of Ethiopia. However, the construction of the dam and its potential impacts has led to serious debates in the downstream of the region. Egypt and Sudan are located downstream and depend heavily on the Nile River for agricultural, industrial, and domestic purposes (Yihdego, Khalil & Salem, 2017).

The GERD with estimated a total cost of around US\$5Billion, is considered by the Ethiopians as a symbol of modernity, proud of it as a home-grown project, development, hope and reducing poverty. The dam, which is the largest hydropower project in Africa, generating more than 6,000MW electricity, will not only meet the country demand but will also be exported to the neighbouring countries (Kahsay et al., 2015; Zhang et al., 2015). For Ethiopians, the dam is empowering regardless of any ethnicity of political affiliation and will empower Ethiopia's plan to become middle-income country and become low carbon emission by 2025. It entirely financed by the Ethiopian government (i.e. by the people) and the dam to be source of pride for Ethiopians. It has created more than 10,000 jobs opportunity during the construction of the dam (Yihdego, Khalil & Salem, 2017).

The GERD is the biggest project in the history of Ethiopia. So far, the government of Ethiopia has not produced any document about the environmental and social impacts of GERD. Thus, little is known about the impacts of the dam (Yihdego et al., 2017). However, there are studies highlighted some issues that require more attention, which resulted in the following findings: 1) At least 5,110 people living downstream will be resettled and villages located near the dam (home to 7,380 people) will also be resettled. However, there was another independent study estimate is that about 20,000 people are to be resettled (International Rivers, 24 January 2014<sup>37</sup>). 2) The high lands of Ethiopia are most sediment-prone and, thus, will pose a big risk for sedimentation of the reservoir and, consequently, will affect

<sup>37</sup> "The Grand Ethiopian Renaissance Dam Fact Sheet" <https://www.internationalrivers.org/resources/the-grand-ethiopian-renaissancedam-fact-sheet-8213>

the dam's power generation capacity and life span. 3) The Benishangul-Gumuz region, where the dam is located, is one of the few places in Ethiopia that has remnant forest vegetation. The dam's reservoir will flood 1,680km<sup>2</sup>, which comprise 90% of the forest area and a source of livelihood for the local community and represents an excellent variety of biodiversity. 4) Studies have indicated at least 150 species of fish in the Ethiopian portion of the Nile River, which resulted in high consumption of fish by the local population, implying the dam will affect the natural habitat and the fishery.

However, according to Jennifer (9 July 2013)<sup>38</sup>, the Ethiopian government has a solid plan for resettlement of the affected people. The resettled people are happy in their newly built houses and are compensated more than what was expected. Except a few elderly people, all other locals believed that the dam is a sign of hope and prosperity for them and for the country in general. The area around the dam will comprise of a 5km buffer zone for control of malaria. In general, though the real scale of the environmental impact of the dam is unclear; what certain is that a successful GERD will play an important role in empowering development and will contribute to the future of Ethiopia (Yihdego, Khalil & Salem, 2017).

To support economic development at an annual growth rate of more than 10%, it is necessary to expand the electric-power supply at a rate of more than 14% per year and the country has enough potential to meet this demand (FDRE, 2011). A sustained demand for energy is critical to support the expansion of the country's energy sector, which in turn will be vital to support the country's economic growth and to facilitate the economic transformation from being highly dependent on the primary sector to having broader, productive secondary and tertiary sectors. With such a growing demand for energy related to industrialisation and urbanisation, the government has been tried to recognise that harnessing clean and renewable-energy sources is critical. This is a fundamental enabler of modern economic development, needed to power cities, fuel industrial activities electrify rural areas and pump water for irrigation purposes in agriculture.

As Swilling (2010) states, investing in resource productivity and energy efficiency is an opportunity to create jobs, improve infrastructural services, build new knowledge industries, and rebuild the ecosystem's capacity to support life. For instance, Ethiopia is one of a few African countries to have made substantial commitments to 'green new deals' aimed at stimulating economic growth through the creation of millions of 'green-collar jobs'.<sup>39</sup> Adopting the green economy path promotes socio-economic targets such as rural development, health and the creation of employment in high value-added production. In addition, Ethiopia intends to be a carbon neutral country by mid-2020 via a combination of investments in renewable energy and reforestation, which in turn could attract substantial carbon finance (Swilling, 2010).

<sup>38</sup> "Another view on the Nile: an interview with Jennifer Veilleux". Catherine Pfeiffer blog <http://catherinepfeiffer.blogspot.com/2013/07/another-view-on-nile-interview-with.html>

<sup>39</sup> Green jobs are work in agriculture, manufacturing, R&D, administration, and service activities that contribute substantially to preserving or restoring environmental quality. The green-economy strategy in Ethiopia focuses on four pillars: the adoption of agricultural and land use efficiency measures; increased GHG sequestration in forests, i.e. protecting and re-establishing forests for their economic and ecosystem services, including carbon stocks; deployment of renewable and clean power generation; and use of appropriate advanced technologies in industry, transport, and buildings (cf. FDRE, 2011:20).

As the policy document of *'Ethiopia's Climate Resilient Green Economy: Green Economy strategy'* indicates that the green economy strategy of the country is integrated with the consecutive mid-term five-year transformation plans and sectoral strategies to reinforce the country's long-term economic vision (FDRE, 2011). With the implementation of the Climate Resilient Green Economy (CRGE) strategy, the country is geared towards meeting the vision of becoming a middle-income country and building a carbon-neutral economy. To realise this in a sustainable manner, the nation has implemented an intensive and pragmatic natural resource conservation and management programme by mobilising the rural community (FDRE, 2011). Natural resource conservation has been given priority in the consecutive mid-term five-year development plans including GTP-I and GTP-II because it plays a crucial role in ensuring sustainable rural development. Through mobilising communities, large-scale soil and water conservation activities and afforestation/tree planting have been carried out every year (UNDP, 2015). Such type of natural resource conservation mechanism is believed to have wider environmental benefits, such as increased vegetation coverage and carbon storage. For instance, forest coverage in Ethiopia was around 13% in 2001, but as a result of widespread natural resource conservation practices through broad-based participation and mobilisation of communities the coverage was increased to 15% by 2014 (Ministry of Environment and Forest, 2014). This indicates that to speed up the socio-economic development of the country by addressing the prevailing environmental problems; the government of Ethiopia has adopted a climate-resilient green economy as a development strategy.

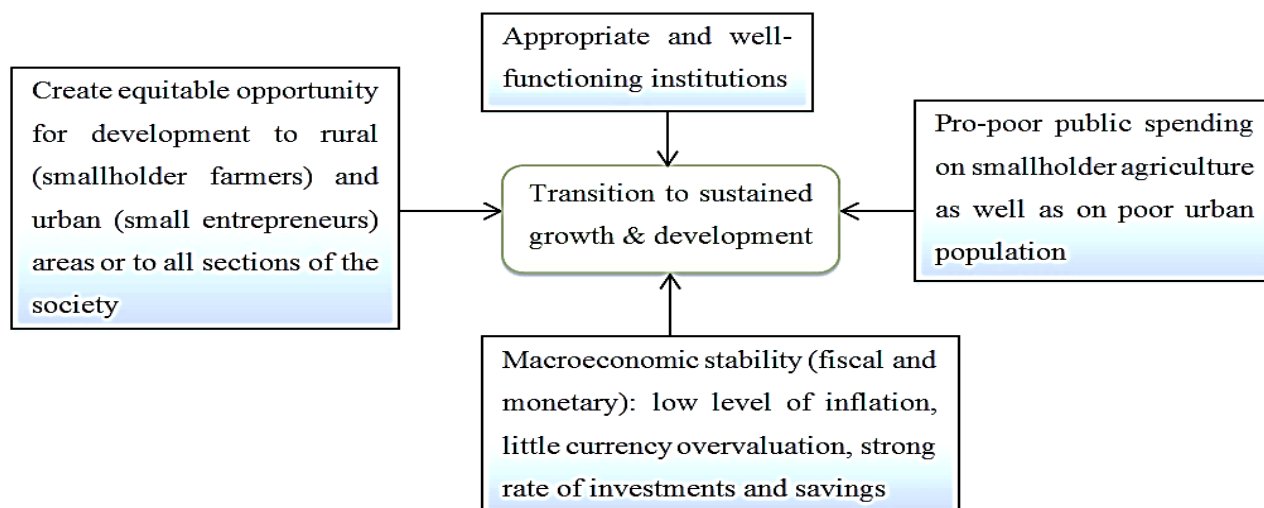
Furthermore, the generation of clean, renewable energy in the form of hydropower, irrigation development, and integrated watershed management plays a critical role in mitigating the impact of and adaptation to climate change (World Bank, 2010). Implementation of a green-economy strategy and huge public investment in renewable energy is coincided with the objective of the country's sustainable and efficient use of resources to build a green economy. This will enable Ethiopia to use its available potential renewable energy for power generation as a means of establishing and sustaining its economic competitiveness. Greening agriculture and industrialisation has become a priority agenda in Ethiopia, like many other African countries, and greening-farming practices can increase the productivity and production of smallholder farmers. The greening practices are supposed to increase energy and material efficiency, thus yielding significant economic margins reducing ecological and climate change risks in both the short- and long-terms (Benedict, 2014). For instance, once the developmental states consolidated their economic development via technological capacity-building, institutional functionality and human developmental capabilities shifted from massive investments in material conditions of modernisation to establishing a knowledge-based economy using the opportunity of the information technology revolution (Chibber, 2002).

Equally impressive, the country set a target to become the top electricity supplier/exporter of renewable energy sources in the East African region. However, the country's current (up to 2010) generation capacity of power from all sources is only about 5% of its 45000MW hydropower potential (Negash, 2011). Making an intensive investment in the energy sub-sector will help the country to generate foreign exchange by

exporting hydropower energy to neighbouring countries. This indicates that the country will intend to become an energy hub in the East Africa region in the long-run with its estimated potential of renewable energy (Negash, 2011). Accordingly, the country set a target to become a key producer and exporter of power, to transform potentially Africa's power sector through the construction of several hydroelectric dams and other alternative energy sources. The country has already signed agreements with almost all its neighbours to supply clean energy. This provides an opportunity to replace electric power generated from fossil fuels, which has much higher average costs and significantly higher emissions. By exporting its clean electricity, Ethiopia can share its green development experiences with the region, in addition to contributing positively to its balance of trade or serving as a source of foreign exchange (FDRE, 2011). As different sources indicated that, Ethiopia has sufficient renewable energy sources to achieve its green economy development strategy in a sustainable manner.

Figure 4.6 shows how policy interactions help to achieve sustainable economic development. The country's economic growth is becoming broad-based, diversified, and inclusive, with increasing contributions to the GDP from all sectors of the economy. The state is committed to allocate more resources to economic and social infrastructure aimed at eradicating poverty, and to achieve rapid and sustainable economic growth and development.

**Figure 4.6: Policy interactions towards sustainable economic development**



Source: Author's own

Investment in infrastructure is supposing to be vital to create a business environment that is conducive to economic growth, industrialisation, job creation, and poverty reduction (UNCTAD, 2005; Ajayi, 2006). Although Ethiopia has invested considerable public resources (as per the capacity of the economy) in key infrastructure development, such as roads, communication, housing, and energy in a few selected manufacturing sectors and, more recently, the railways, industrial zones/parks, but much still needs to address the existing infrastructural gap to improve institutional quality and accomplish further transformation of the economy. This indicates there is a need to both extra lessons and engage with the massive challenges



or constraints the country still faces to accelerate its development process as required. This is due to the fact there are still more than 22 million people living below the absolute poverty line, the absolute income inequalities getting wider and wider, unemployment (particularly youth unemployment) remaining the challenge of the Ethiopian economy (Teshome, 2012; UNDP, 2015; World Bank, 2016). In general, the infrastructure in developing countries is underdeveloped and this affects productivity, so Ethiopia is not unique in this case. Intensive investment in infrastructure is no longer an option, but a necessity to accelerate the development process. The existence of adequate infrastructure is considered as the engine of economic development and attracted private-sector investment in the productive sectors, which will accelerate economic transformation/development process.

Enhanced infrastructure development and services have a direct impact on the increment of per-capita income growth. For instance, by raising the infrastructure services of all SSA countries to the level of the regional leader, Mauritius, could add 2.2% per annum to per-capita income growth; if this reached the level of South Korea, the annual per-capita growth could be 2.6% (Commission on Growth and Development, 2008). Investing in better rural feeder roads could also bring high returns by dramatically lowering the cost of inputs and marketing, and hence, increasing the farmers' margins. Even low-quality feeder roads raise more poor people out of poverty for every dollar, than high-quality trunk roads, making them a 'win-win' partnership strategy for growth and poverty alleviation (Kingombe, 2011). For instance, in Ethiopia access to all-weather roads reduced poverty by 7% and increased consumption growth by 16% (Dercon et al., 2008). This indicates that investment in infrastructure has a strong, direct spill-over effect on increasing economic growth and reducing the level of poverty, which contributes hugely to socio-economic transformation. The other important aspect of economic growth in Ethiopia is its emphasis on wealth/resource distribution among the entire population by creating access to opportunities for development for both rural and urban areas. Ethiopia's development strategies (development projects) and its public expenditure are both pro-poor and pro-growth to ensure fair income distribution. Pro-poor economic growth should be considered as one of the main elements of the developmental states (Zenawi, 2006).

**Table 4.5: Trends in pro-poor spending in total public expenditure (in %)**

| Sectors/years      | 2004/05 | 2005/06 | 2006/07 | 2007/08 | 2010/11 | 2011/12 | 2012/13 |
|--------------------|---------|---------|---------|---------|---------|---------|---------|
| Education          | 19.8    | 21.8    | 23.7    | 21.3    | 24.9    | 23.9    | 25.2    |
| Health             | 4.9     | 4.6     | 6.6     | 7.3     | 6.7     | 6.2     | 7.4     |
| Agriculture        | 15      | 15.2    | 12.9    | 11.7    | 8.8     | 8.9     | 9.5     |
| Roads              | 11.3    | 12.4    | 14.1    | 17.7    | 19.7    | 23.2    | 22.4    |
| Water & sanitation | 6       | 6.1     | 5.7     | 6.1     | 6.3     | 8.2     | 8.2     |
| Total              | 57      | 60.1    | 62.9    | 64.1    | 66.4    | 70.4    | 70      |

Source: Adapted from UNDP (2015)

Pro-poor growth increases opportunities for poor citizens and decreases socio-economic ills or constraints. Public investment in the social sector (i.e. education and health to boost human capital) and in basic infrastructure is essential for sustainable and inclusive economic growth.<sup>40</sup> Benefit sharing (reducing income inequality and poverty) and participation by a large segment of the population (employment) are the two features of inclusive growth. The most successful project in Ethiopia has been the work for soil and water conservation campaign for 30 to 40 free labour days every year throughout the country implemented by means of proactive and organised community participation. This type of natural-resource conservation mechanism is believed to have wider environmental benefits, such as consolidation and natural-resource rehabilitation (i.e. increased vegetation cover and recharge of streams and groundwater source), carbon storage and the strengthening of natural-resource management.<sup>41</sup> The other campaign is to provide one alternative source of water technology for the smallholder farm households that can be used either to compensate rainfall shortages or to produce extra products in the dry season. Public works have contributed to a large-scale network of rural roads and other physical infrastructure; the protection and improvement of household food security; and asset security and new asset formation. All this shows that creating opportunities for development by mobilising the community in local development programmes and increasing the share of pro-poor public investment helps to achieve sustainable economic development. Mass mobilisation accompanied by pro-poor public investment is pivotal in the process of sustainable and equitable development in Ethiopia.

To summarise, evidences indicated that the developmental state in Ethiopia has so far registered encouraging economic performance through the formulation and implementation of contextualised development policies and programmes at different levels. The country has made spectacular leaps on multiple development fronts in recent years. For instance, the average GDP growth rate for eleven years (2003/04- 2014/15) was greater than 10%, while annual average growth rates for agriculture, industry and services were 9%, 13.8% and 12.2% respectively (MoFED, 2014, Oqubay, 2015; UNDP, 2015). Extensive investments in public infrastructure and the existence of a conducive external environment (as a necessary condition) have been contributed a greater share for such rapid economic growth (Fantini, 2013; World Bank, 2016; Priewe, 2016). The public investments and expenditures of the country are concentrated for more than 60% on poverty-oriented sectors and basic social services provision (Fantini, 2013) As a result; per capita income

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<sup>40</sup> Inclusive growth attempts to link economic growth with poverty reduction and inequality alleviation by offering development opportunities for all groups in the economy. In addition to reducing poverty and inequality, inclusive growth emphasises improving the productive capacity of individuals and creating an environment conducive for productive job opportunities. Inclusive growth can include all strata of a society such as the poor, the near poor, middle-income groups, as well as women and young people, who are the most vulnerable. Inclusive growth can thus be considered as widening the opportunities for participation, both with respect to engagement in productive economic activities and having a voice in the direction of the growth process itself (Ranieri & Ramos, 2013).

<sup>41</sup> Natural-resource management interventions such as afforestation, terracing, construction of check dams and the protection of wetlands can help to mitigate or reduce the impact of climate-change pressure. For this reason, watershed protection is a key-policy priority and forms a central component of the PSNP, in addition to the free campaign, designed to strengthen rural livelihoods over the long-term while offering cash or food for work during the short term (World Bank, 2010).

grew from US\$129 in 1999/2000 to US\$632 in 2013/14. During this period, not only an increase in per capita income, but there was also a slight structural change in the economy. For instance, in 2003/04, the agriculture sector contributed about 47% of the GDP. By 2013/14, the share of agriculture sector in GDP had declined to 39%, while the share of the industrial sector and the services sector increased to 15 % and 46% respectively, and service sector surpassing the agricultural sector. This indicates that growth was concentrated in services and agriculture, while manufacturing performance was relatively modest, or low and need to be exerted further efforts to augment the share of the manufacturing sector (UNDP, 2015; MoFED, 2013, 2014). Such rapid economic growth has enabled to undertake further massive public investments in social and infrastructure sectors, which have a direct spill-over effect on the wellbeing of citizens (CSA, 2012). The expansion of investments by MSEs, large-scale public projects, private sector investments (in medium and large-scale manufacturing, hotels and restaurant, real estate and housing) have created significant number of job opportunities. Even though the economic growth has been creating new job opportunities, unemployment and underemployment remain critical challenges for the Ethiopian economy (MoFED, 2014; World Bank, 2015).

Growth supported by consistent resource mobilisation and allocation is in line with carefully formulated development plans, institutional reforms, agricultural modernisation, and state-led development investments. The government has tried to mobilise domestic resources to fund its national development projects to achieve its development objectives. By increasing the share of domestic resources, a country aimed to avoid the volatility of external assistance as well as borrowing, and to increase its policy space to strengthen accountability and achieve greater ownership of its development strategies. Although this has not been sufficient to address all development ills of Ethiopia, the state has made significant strides in both economic growth and social development, and this has paved the way for addressing major development ills of the economy. There are encouraging signs of a decline in absolute poverty, and notable records of infrastructure and social-sector development. This is attributed to broad and multi-faceted programmes, implemented in both rural and urban areas such as the intensification of agriculture, infrastructural development, food-security programmes, and urban development programmes like the MSE development. Over 60% of total government expenditure (see Table 4.5) is directed towards poverty alleviation (pro-poor) and pro-development sectors (CSA, 2011), which indicating the ruling coalition's commitment to improve the welfare of its citizens. While there has been rapid economic growth, inflation has emerged as a major macroeconomic challenge since 2007/2008. The average inflation rate was below 20% before 2006/07 but accelerated to 25.3% in 2007/08, peaked at 36.4 % in 2009/10 and moderated slightly to 33.7% in 2011/12. This high rate of inflation adversely affected people's well-being and efforts to promote private investment (UNDP, 2015). However, in recent years, as a result of various stabilising measures including tighter fiscal and monetary policies taken by government helped contain inflation close to 10% (MoFED, 2014; World Bank, 2016).

#### 4.6 The role of a developmental state in nurturing the private sector

The private sector is supposed to be the engine of economic growth and industrialisation though there are few countries have achieved industrialisation without a successful private sector, the exceptions being the USSR and China (up to 1978). It is therefore imperative that the developmental state nurtures the private sector by creating a productive business environment and encourages them to become competitive in the market place. For instance, in Japan and South Korea, the state developed an indigenous private sector, which played a critical role in the industrialisation of these countries. These indigenous private sectors have since grown into some of the most powerful companies in the global economy. Japan and South Korea used a mixture of protectionism, subsidised credit, and other incentives for their domestic private sectors to develop an indigenous technological base, and then they allowed them to compete in the global market (Chang, 2003a). However, the state should not only provide support (incentives as carrot) but should also challenge to the private sector (as a stick) to perform better and become more competitive in the export markets; and state support should be conditional on the achievement of certain policy objectives. Therefore, the relationship between the state and the private sector should depend on a forward-looking performance directed by a ‘carrot’ and ‘stick’ approach.

A productive private sector is perceived as a major prerequisite for the overall success of the emerging developmental state in countries like Ethiopia. The state could expect to engage in two major ways: at the broader level, the state should develop strong relationships with the private sector and its constituent businesses, and empower domestic firms through incentives such as tax holidays, tax breaks and concessional loans (Kieh, 2015). Public investment in infrastructure expansion and human-resource development will make the private sector more profitable, and will ‘crowd in’ the private sector in the development process. In turn, private sectors (both domestic and foreign) expected to contribute job opportunities and domestic capital formation and transformation by engaging in the manufacturing and commercial farming sectors. The existence of modern infrastructure and effective institutions has expected to encourage the private sector to take investment risks in productive sectors. Therefore, increasing public expenditure on infrastructure and nurturing well-functioning institutions are remaining as a critical homework for the Ethiopian state.

The private sector should intend to promote and encourage industrialisation. To ensure fast and sustained industrial development, the state need to focus on industries that are labour-intensive, industries which have broad linkages with the rest of the economy, use agricultural products as input, that serve as export-oriented and import substituting, and contribute to rapid technological transfer (MoFED, 2002a). The export-oriented development strategy leads to better resource allocation, creating economies of scale (due to larger international markets) and increasing production efficiency through technological development, capital formation and transformation, employment creation and, hence, economic growth. The export sector generates much-needed foreign exchange, which can be used to provide the public funds that required to

direct investment in growth-enhancing industries. The foreign-exchange earnings from the exports allow the import of intermediate inputs, mainly capital goods for domestic production, to stimulate exports further, thus expanding the economy's production possibilities.

The Ethiopian state has recognised the private sector as 'an engine of growth' and has continued its support to enhance the competitiveness of the sector by providing basic infrastructure, institutional support and other incentives. Since the lack of infrastructure and effective institutions caused high transaction costs for the private sector, the state is expected to be the only institution that can possibly take responsibility for investment in the physical infrastructure, and the provision of direct credit for strategic industries, and the protection of infant industries (UN-Habitat, 2014). However, the quality and capacity of the public sector to provide regulatory support to the infant private sector in the Ethiopian developmental state are practically challenging by the existence of rampant corruption and rent-seeking practices.

It is obvious that, industrial development in general and development of the manufacturing sub-sector in particular, is believed by many (though not all) to be the prime driver of economic transformation and sustain growth (Chnag, 2003a, 2003b; Oqubay, 2015). In the manufacturing sub-sector, the state has been providing substantial incentives for textiles and garments, as well as leather and other agro-processing industries through establishment of industrial zones/parks, privatization of state owned enterprises, capacity building/trainings, bestowing tax holidays and tax relief, provision of basic infrastructure services, preferences in finance/credit provision and foreign currency allocation, and other incentive. Furthermore, the establishment of public institutes like Leather and Leather Product Technology Institute and Textile Industry Development Institute to support the respective manufacturing sub-sectors have tried to provide various trainings that enhanced the skill of the labour force, productivity and competitiveness (Ohno, 2009; MoFED, 2014; Balema, 2014; Oqubay, 2015). These sub-sectors expected to have both direct and indirect linkages with the agriculture sector, employ substantial proportion of skilled and semi-skilled labour forces, and boost export earnings. As equal as supporting the export-promoting sector, the state has been working on promoting import-substitute domestic industries (MoFED, 2006; 2014; Ohno, 2009) to replace imports that 'drain-off' the scarce foreign-exchange earnings.

Shortage of skilled labour force obviously constitutes as a key constraint to growth and improved productivity in the manufacturing sector despite the country has made progress in expanding access to education. In the short run, the provision of Technical and Vocational Education Training (TVET) could be used to bridge the gap of skilled labour supply to the manufacturing sector (World Bank, 2016). Even though the state tried to provide different supports and incentives to strengthen the manufacturing sector, the domestic private sector investment is inclined more towards the services sector than to the manufacturing sector. Considerable effort is also channelled into promoting the MSEs<sup>42</sup> as the basis for the development of

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<sup>42</sup> The MSEs development are essential to create a broad-based springboard for the development of competitive domestic industries and the private sector, create employment opportunities and, thereby, reduce the level of poverty.

medium- and large-scale, as well as indigenous private-sector enterprises. It did this by organising, training, providing land, access to loans and markets. Ethiopia's practice of promoting and supporting MSEs more or less coincides with the experiences of some East Asian developmental states, such as Japan, South Korea, and Taiwan, all of whom created a strong domestic private sector that eventually grew into medium- or large-scale powerful indigenous companies. Although these SMEs face difficulties due to their low levels of entrepreneurial experience, they have relatively played significant role in creating job opportunities and an income for thousands of jobless people in urban areas.

To enhance further the role of the private sector, there is regular top-level dialogue at a national level (on annually basis chaired by the Prime Minister of the country) between high-level of government organs and the representatives of private sector (such as the Ethiopian Chamber of Commerce and Sectoral Associations, or Business Membership Organisations). Working closely with the private sector means, among others, having the means to communicate and cooperate on the reforms required to stimulate the economy further (Balema, 2014; Oqubay, 2015). The government and private sector appreciated from the onset that working together was an imperative to developing the economy, properly managing the existing opportunities and addressing the challenges/constraints. For instance, the government recently increased its effort to develop industrial zones in different parts of the country, and these zones, in turn, intended to play a major role in attracting a substantial amount of FDI and creating a considerable amount of employment opportunities (Balema, 2014; Oqubay, 2015). This systemic state-private-sector dialogue and cooperation helps the state to intensify its efforts to address the constraints related to infrastructure, institutional bureaucracy and credit issues (especially for small and medium-size enterprises) to further promote the role of the private sector in the manufacturing sub-sector. Competitive cheap labour, energy costs, duty and quota free access to the US and EU markets, tax exemptions, holidays, and building consumer markets are key pull factors for FDI in Ethiopia, although there are some challenges in practice (US Department of State, 2014). Regardless of the existing challenges in practice, the private sector is expected to exploit the existing investment opportunities and align its investment projects with the state's priority areas, which are supposed to have significant social benefits and, thereby, play a greater role in accelerating economic growth and job creation. However, the contribution of FDI to the economy depends on the host country's strategic vision, as well as how it fits into the overall national development strategy. In this regard, the business environment and the quality of physical and human capital are considered as the key determining factors to attract FDI or the private sector in the productive sectors.

The state looks committed to improving the business climate to enable growth and employment creation from the private sector. Trade and credit policy incentives, massive public investment in key infrastructure (such as road, railways, communication, electricity, water and others), reform in the property rights regime,

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On the other hand, medium- and large-scale manufacturing industries create a competitive national economy by ensuring rapid and sustainable technological transfer, an export-oriented economy, an environment conducive for micro and small enterprises, and agricultural development (MoFED, 2013).



along with the commitment to maintain macroeconomic stability have been extensive (Teshome, 2012; Fantini, 2013). Furthermore, the state established some public specialised institutes such as Leather Industry Development Institute, Textile Industry Development Institute and others to support the private sector to engage in the manufacturing sector (Balema, 2014; Oqubay, 2015). The government also tried to provide different incentives and support programmes to build the capacity of the private sector (as ‘carrots’) while it also introduced several disciplinary measures (as ‘sticks’), though there are multiple of limitations in execution of the se carrot and stick instruments in practice. These all efforts tried to provide by the government have expected to contribute positively for economic growth and increase the inflow of FDI into the economy (Balema, 2014; MoFED, 2013; 2014; Oqubay, 2015). These ‘carrot’ and ‘stick’ instruments were practised widely in the East Asian developmental states to nurture their domestic private sectors. As UNCTAD (2009:34) explains:

The incentives and resources provided by Government included the creation of rents. That is, policies were devised to ensure that private companies would secure profits above normal market conditions. Such rents were particularly important for inducing new investments and innovative activity. The management of rent-seeking was thus an essential part of governance in successful developmental States. In this model, rent-seeking was not in itself bad. But the key governance issue was to ensure that rents were derived through activities that had social as well as private returns and that the rents, when earned as profits, were reused in a way that supported national development.

The incentives and disincentives are based on the private sector’s development performance and are commonly related to production and export objectives, and the incentives provided by the state are aimed at boosting competition among private firms. To ensure this, the private sector needs to reduce the misuse of resources and shield them against capture by interest groups; the incentives are gradually subject to the discipline of competition.

#### **Box 4.2: Examples of ‘carrot’ and ‘stick’ instruments in the leather industry**

The strategy in which a strong state mobilizes incentives and disincentives to induce economic agents to create value are most vivid in the leather and leather-product industry. The goal of this industry, as set by the government, is to supply finished leather or finished-leather products for export and domestic markets by acquiring management and technology capabilities to process what had previously been sold as raw or semi-finished leather. The carrots, are a series of policies have been offered to the industry, including:

- ✓ ‘Establishment of the Leather and Leather Product Technology Institute (LLPTI) to provide training, quality tests and some production processes;’
- ✓ ‘Donor assistance, foreign advisors and twinning with a British institute for LLPTI;’
- ✓ ‘Preferences in finance and foreign currency allocation;’
- ✓ ‘Business matching between domestic shoe producers and European firms;’ and
- ✓ ‘Monthly government business meetings to promote the industry and remove its barriers’ (Ohno, 2009)

The sticks included a ban on raw leather (crust leather) export and high tax of about 150% on exports of crust or semi-finished leather, which represented about 40% of Ethiopian leather exports in 2011, to protect the domestic market (World Bank, 2014c).

However, there are critics who claimed that the ‘carrot’ and ‘stick’ instruments are not transparent, and the policy-makers and implementers tend to patronise the private sector instead of encouraging competition and innovation (World Bank, 2013b). Despite tremendous efforts exerted by government to support private-sector development, the policy mixes have the unintended consequences of ‘crowding-out’ the private sector in access to land, credit and foreign-exchange markets. The public investment rate of the country is the third highest in the world and this has had probably a negative impact on the distribution of credit, land and foreign exchange (World Bank, 2013b). The private sector in Ethiopia, however, has obviously not yet reached the stage of playing a visible and dominant role in the economy although there are several policy incentives and support mechanisms. The private sector is dominated by risk-averse behaviour and it does not eager much to engage in productive economic sectors though there are different policy packages provided by the government in order to engage into the productive sub-sectors (Teshome, 2012; Balema, 2014; MoFED, 2014). At the same time, the state bureaucracy and institutions are not yet reached at a level where they can administer the policy direction put in place to support the private sector. The issue of competent bureaucracy and well-functioning institutions are considered as the main challenges for the state apparatus and these need to be improved (Balema, 2014). It is common that private sector in low-income countries, like Ethiopia, faces huge challenges in competing in the global economy, and more effective industrial policies and instruments that facilitating economic growth and structural transformation need to be designed and executed in a proper manner (Oqubay, 2015). Therefore, the government needs to put further efforts into addressing these constraints that create obstacles in the private sector through continuous state—private sector dialogue and different policy amendments, and by boosting public investment in the critical infrastructure to smooth the business environment.

There is a significant amount of capital flooding into public-sector projects, which will have expected a positive spill-over effect for private-sector development and create conducive business environments in general (US Department of State, 2014). The existence of conducive business environment accompanied by macroeconomic stability is obviously indispensable for attracting investment (both domestic and foreign), which is expected to contribute for employment creation and poverty reduction. For instance, the amendment of Ethiopia’s investment proclamation No.769/2012 introduced provisions for the establishment of industrial zones, both state and private run, with favourable investment, tax and infrastructure incentives for key priority investment areas. The government established the Ethiopian Industrial Zone Corporation under the Ministry of Industry<sup>43</sup> to oversee the construction and regulation of industrial zones. The key priority areas in the industrial sector are textiles and garments, leather, sugar, cement, metals and engineering, chemicals, pharmaceuticals and agro-processing (FDRE, 2012).

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<sup>43</sup> In addition, under the Ministry of Industry there are different sectoral supporting institutions, such as: Textile Industry Development Institute; Leather Industry Development Institute; Metal Industry Development Institute; Chemical and Construction Input Industry Development Institute; Meat and Dairy Industry Development Institute; Food Beverage and Pharmaceutical Industry Development Institute; and National Kaizen Institute, all of which provide support to the private sectors.

**Box 4.3: The development of industrial zones in Ethiopia**

Aware of the problem of land supply, the government has invested in the development of industrial parks/zones for private investments. In 2012/13, demand-based industrial zones were developed in different regional states and city administrations with a configuration of the entire necessary infrastructure. A total of 3537 hectares of land was prepared for the establishment of industrial zones in Addis Ababa, Kombolcha, Dire-Dawa, Mekelle, and Hawassa. Of the five industrial sites, construction was started in the Bole Lemi industry zone site in Addis Ababa, which is known as the Addis Industrial Village. Privately owned industrial zones are also under development around Dukem and Finfine areas of Oromia region. These include Eastern Industrial Zone around Dukem, which is owned by a Chinese investor, and Sendafa Industry Zone, which is owned by Turkish investors. Furthermore, a company called Huijan International Shoe City has requested 320 hectares of land to establish an industrial zone. All these initiatives are expected to result in the expansion of private investment, particularly in manufacturing (MoFED, 2014). The industrial zones are created to enable competitive conditions, to integrate the manufacturing sectors based on value creation, as well as to attract and expand investment. Furthermore, the first phase of Mekelle, Hawassa, and Kombelcha industrial parks was completed recently, the Hawassa industrial park is officially started its operation, and the remaining are already ready for operation.

The operational framework for planning and implementing industrial zone development projects will be through a consultative process with the appropriate stakeholders at the project-site level. The benefits of the industrial zone development will expect to promote extensively to attract investors (both foreigner and domestic) to the zones. The aim is to provide capacity-building, linkage services to management, technology transfer, factory setup, boost level of export, create employment opportunities, and similar matters so that industries clustered within industrial zones operate with the spirit of sound competition. The main responsibility for initiating and carrying out these activities will be the responsibility of the Industrial Zone Development Corporation.

The industrial zones are expected to provide a high potential for growth and value addition, as well as for strengthening both the forward and backward linkages among economic sectors and creating considerable employment opportunities. The industrialisation packages and the development of the industrial zones have in effect created another enclave for international capital in the form of FDI to boost the national economy. The establishment of industrial zones in Ethiopia is in line with the experiences of the East Asian developmental states and Mauritius who built export-processing zones (EPZs) or special economic zones (SEZs). For instance, Singapore, Taiwan, and South Korea built EPZs in the 1960s and 1970s to attract labour-intensive and export-based manufactured FDI. Furthermore, the EPZs or SEZs have created the second-tier of NICs, including China, where foreign firms were granted various preferential treatments, and this led to the rise of numerous export-oriented enclaves. The Chinese EPZs and low-wage labour attracted FDI to produce at low cost and develop the export-driven manufacturing sector, i.e. EPZs emerging as effective locations for FDI in the 1990s. The second-tier NICs, such as China, also rapidly liberalised their FDI regulations to attract labour-intensive manufacturing sectors. Consequently, competition for FDI has become fierce (Kimura, 2006). Such FDI-led ‘take-off’ at the beginning stage of catch up has been effective in the labour-abundant emerging economies like Ethiopia subject to advanced industrialisation, which increasingly depends on knowledge and demands sophisticated approaches.

FDI is an important source of private capital and has the potential to promote economic growth, diversification, and intensification, enhance skills development, facilitate the transfer of technology and access to foreign markets, improve the competitiveness of domestic firms by creating capacity for value-addition, as well as spawn the development of new economic sectors. For instance, Mauritius and the second-tiers of the Southeast Asian developmental states used FDI successfully in this way, using public investment in infrastructure, training, and skills to attract sectors producing goods and services with a high value-added component (UNCTAD, 2005; Ajayi, 2006). Hence, to attract considerable FDI, Ethiopia tried to give special investment incentives to create a favourable business environment for foreign capital, such as leasing virgin farmlands, bestowing tax holidays and tax relief to foreign investors to promote large-scale commercial farming and the manufacturing sub-sector. These foreign companies and domestic private sectors, which invest in large-scale commercial agriculture, are expected to be a source of job opportunities, foreign exchange, and technology and knowledge transfer. Furthermore, recently the manufacturing sector has been drawing foreign companies to the textile and leather industries due to the existence of cheap labour, competitive electricity prices, duty, and quota-free access to the US and EU markets, tax exemptions and tax holidays (US Department of State, 2014).

However, this attraction of FDI has free from criticism coming from a few international organisations related ‘land grabs’ in large-scale commercial farming and the ‘crowding-out’ of the domestic private sector. Regardless of the extent of the problems, in practice, there are different problems related to the implementation of these large-scale commercial agricultural programmes, and other mega-development projects in the country. Many of the problems basically raised due to the political elites/state functionaries at different levels lacked the commitment and professionalism required to implement the development programmes, as well as lack of commitment from the private sectors themselves to work as per their agreement (Jebena, 2015). However, in practice, no one has denied the possible environmental or social problems associated with any development project; but what is required is that these investment projects should be undertaken only after a social cost–benefit analysis and feasibility study. It is expected that in developing countries like Ethiopia, which have the potential, the large-scale commercial agricultural development and other mega projects aimed to bring positive socio-economic outcomes (both in short- and long-terms), by improving the life of the community and positively contributing to the overall economic growth and development of the country. Therefore, Ethiopia can continue to use its natural resources in a sustainable manner to accelerate its development process if it strengthens the regulatory capacity of its public sector and institutions to prevent the wastage and misuse of resources by the private sectors.

#### **4.7 The role of a developmental state in the provision of basic social services**

State intervention in the developing economy enhances socio-economic development by allocating resources for health, education, potable water and other social safety nets. In such economy, the absence of state intervention has increased poverty and inequality, and excluded the poor from benefiting from economic

growth. One of the features of a developmental state is to improve the social well-being of the society because the free market does not care about those who cannot afford to pay the market prices. The provision of basic social services and essential infrastructure by the state contributes to boosting economic development and improving the lives of communities, particularly the poor (Fakir, 2007). The skills and values required to provide public services are defined by the development priorities and challenges, and the specific institutional conditions that exist or need to be created. The coordination of development is essential to ensure that the public service and operations of other public institutions are aligned with the national development agenda (Fakir, 2007).

The public service should be responsive to the development challenges, while being aware of the context and environment in which it operates. In Ethiopia, the main basic services that are directly supported by the state at grassroots (village) level are education, health, agriculture, a potable water supply, electricity, and rural road infrastructure. The fulfilment of such basic social services is crucial because today's development approach is a more holistic endeavour and capability enhancing. Accordingly, spending in the health sector is focused on health-extension workers (HEWs), while spending in the educational sector is focused on teacher and school infrastructure development. Similarly, spending in the agricultural sector is on agricultural-extension workers; in the water sector, spending is on maintenance and operation; and spending on rural roads is focuses on both their maintenance and the mobilisation of the community to participate in new road construction (Bill and Melinda Gates Foundation, 2010).

The social objectives in the Constitution of the FDRE, Article (90) sub-Article (1), recognises that 'To the extent the country's resources permit, policies shall aim to provide all Ethiopians access to public health and education, clean water, housing, food and social security' (FDRE, 1995:33). The provision of a clean water supply and sanitation is embodied in the Universal Declaration of Human Rights. The Constitution of the FDRE recognised that clean water and sanitation contribute to the creation of a healthy and active workforce, which drives the national economy forward. Access to a water supply was measured against certain targets and benchmarks: there should be a public potable-water stand within a 1.5km radius in rural areas, and within a 0.5km radius in urban areas. The consumption standard is 15litres per person per day for the rural community and 25litres per day for the urban community. Based on these benchmarks, in 2010 access to a potable-water supply was estimated at 68.5% nationally, with regional differences of 65.8% in rural areas, and 91.5% in urban centres (Negash, 2011).

Owing to the country's strong push to achieve middle-income status by the mid-2020s (MoFED, 2010; Negash, 2011), the federal, regional and district (*woreda*) governments have prioritised the attainment of visible development outcomes as fast as possible, especially in the provision of basic social services, based on the principle of universal access for all. The state has high expectations of better performance from its bureaucracy (state institutions) at all levels in the provision of basic social services to the society. The individuals who are responsible for moving their communities towards specific development outcomes are at the centre of the relationship between policy-makers at the top, alongside service providers, and service

receivers at the bottom (Khan et al., 2014). Ethiopia's relatively well-developed system of fiscal decentralisation facilitates the delivery of these basic service-provision programmes by channelling resources to the *woreda* level to finance the recurrent expenses incurred in the expansion and delivery of these services to the community at the grassroots level (Khan et al., 2014).

HEWs, for instance, promote preventive behaviours, healthy lifestyle practices and provide basic or universal health interventions to the community, particularly in the rural areas. Furthermore, additional teachers are being hired to increase both gross and net enrolment rates to achieve universal primary education for all. The agricultural extension workers teach farmers about the benefits of better farming techniques such as the use of improved seeds, fertiliser, irrigation, watershed management and other modern farming practices to boost farmers' productivity and production. The provision of these basic social services is geared towards benefiting the lower-income population to narrow the gap in income distribution. The development projects in the social sectors emphasise wealth distribution among the entire population in an egalitarian manner, by creating access to opportunities for development. This suggests that Ethiopia's development strategies and public expenditure are both pro-poor and pro-growth in practice. Government leadership (both political and bureaucratic) has tried to play a key role in improving the performance of and access to basic social services (health and education sectors, water and sanitation, and extension services) by mobilising and effectively using resources from both domestic and external sources. Investment in the social sector has a significant multiplier effect for economic growth and intergenerational benefits, and ensures the equitable distribution of resources.

#### ***4.7.1 The role of the state in the provision of health and education services***

The developmental state in Ethiopia has shown a strong commitment to improve the health of its people and per-capita government expenditure on health increased accordingly. A report commissioned by the Tony Blair Africa Governance Initiative, and written by the staff of the Boston Consulting Group, praised Ethiopia as one of the SSA countries that has been most successful in translating recent economic growth into programmes that enhance the well-being of its population (Baker et al., 2013). These gains have been driven by improvements in healthcare and the country has successfully instituted a primary health programme, which is transforming the health situation of its citizens. The Health Extension Programme (HEP) played a big role in the improvement of the primary healthcare service and the HEWs are the major force behind these changes (Baker et al., 2013).

International health experts generally agree that community health workers (i.e. HEWs) should play a significant role in the formal health-care system. In this regard, Ethiopia is a model in the SSA region (Singh & Sachs, 2013). The HEP has been successful, largely because of the strong political commitment to strengthen the health system, with the goal of improving the coverage and access to primary health care in the poor rural areas. Investment in the HEWs has been part of a wider package of the HEP support services and is showing promising results, despite some remaining weaknesses; not all regions have shown a similar



level of success (Admasu, 2013). However, the government has shown its political commitment and leadership, which has resulted in impressive health service coverage and an enhanced responsiveness to community health needs. Health planning and interventions are carried out after extensive consultations and consensus building with multiple stakeholders at different levels (UNDP, 2015).

Ethiopia's HEP is a novel way to deliver affordable health-care services to the majority at the grassroots level. HEP brings community participation via community organisation and mobilisation through continuous awareness creation and behavioural change. The key strategy is the organisation of the 'Health Development Army' (HDA), also called the Women's Development Army (WDA), which consists mainly of groups of volunteer women; it is a household organisation with approximately 25 to 30 members in each group. The HDA delivers key health messages to the community to increase the utilisation of family-planning services; to improve maternal health; to encourage expectant mothers to deliver their babies in health-care facilities; to monitor and regularly report on the health status of the members of their respective groups to health-extension workers; and to facilitate better access to health care information. The HDA is a community-level movement that functions through participatory learning and action meetings. It is an unprecedented platform to engage the community in the planning, implementation, monitoring, and evaluation of health-care interventions at the community level (Admasu, 2013). The HDA is a community movement that helps to consolidate the gains from the HEP and promote community ownership of the programme. It was formed to meet the priorities set in the health development programme. The HDA consists of more than two million, one-to-five peer networks that have been established nationwide (UNDP, 2015).

The HEP is one of the innovative, community-based, health-service programmes that were introduced as pilots in four regions of the country in 2003/04. As the Ministry of Health (MOH) states, the HEP is designed to diffuse the relevant basic-health services to households to raise their awareness about safeguarding their own and community health conditions (Ghebreyesus, 2010). To achieve this, about 34382 female HEWs were trained, and assigned to every rural village. Similarly, about 5080 HEWs have assigned to urban centres to implement the HEP packages (MOH, 2010). The HEWs serve as frontline health-care staff in their respective communities; they increase the level of health awareness and serve as the primary spokespeople, disseminating information on family planning and the importance of preventing prevalent diseases. Various evaluations in low-income countries have found that the HEPs have a significant tangible effect on rural communities' awareness of disease prevention, family health, hygiene, and environmental sanitation. Ethiopia's situation is coincided with that of these other low-income countries, where decentralised expenditure has been shown to improve health outcomes (Faguet & Ali, 2009).

The *woreda*-level spending appears to be pro-poor and pro-growth, focusing on the health and education sectors to create access and opportunities for communities at the local level. For instance, spending on education at the *woreda* level tends to be pro-poor, with the bottom 40% benefiting from 56% of the total expenditure, and the top quintile (20%) benefiting from 13% of that expenditure. The per-capita, *woreda*-level spending on education was nearly three times higher for the bottom quintile than for the top quintile.

Similarly, for the health sector, 63% of *woreda* health expenditure accrued to the bottom 40%, whereas only 10% accrued to the top quintile. The benefit from per-capita health expenditure accruing to someone in the bottom quintile was more than three times higher than it was for someone in the top quintile (World Bank, 2014b).

**Table 4.6: Incidence of *woreda*-level expenditure by wealth quintile (in 2011)**

| Sector                    | Bottom 40%<br>share (in %) | Top 20%<br>share (in %) | Multiple by which bottom quintile<br>exceed top quintile |
|---------------------------|----------------------------|-------------------------|----------------------------------------------------------|
| Education                 | 56                         | 13                      | 2.7                                                      |
| Health                    | 63                         | 10                      | 3.4                                                      |
| Both education and health | 58                         | 12                      | 2.9                                                      |

Source: Adapted from World Bank (2014b)

As Table 4.6 indicates, spending on primary education and health care at the *woreda* level is pro-poor, while overall education and health spending by the federal state is not necessarily pro-poor. Table 4.7 also shows that the primary school enrolment rate and primary-health coverage has improved from its low level in the 1990s (MoFED, 2013). As a consequence of these and other social development measures, the life expectancy rate rose from 57years in 2004/05 to 62.2years in 2012/13 (UNDP, 2015). The state is also looks committed to achieve basic education for all and has developed a workable educational policy to improve access. Accordingly, the literacy rate has increased over time both in rural and urban areas as a result of increased in gross enrolment in primary education; the state's goal is to achieve universal access to primary education for all.

**Table 4.7: Social-sector development in Ethiopia before and after the developmental state**

| Indicators                       | Before  |         | After   |         |         |
|----------------------------------|---------|---------|---------|---------|---------|
|                                  | 1995/96 | 2002/03 | 2005/06 | 2009/10 | 2012/13 |
| Health coverage (in %)           | 40      | 60      | 71      | 89      | 93.4    |
| Number of health centres         | 246     | 412     | 644     | 2142    | 3100    |
| Number of hospitals              | 73      | 115     | 131     | 200     | NA      |
| <b>Education coverage (in %)</b> |         |         |         |         |         |
| Primary school NER               | 36.6    | 61.6    | 69      | 82.1    | 85.9    |
| Secondary school NER             | NA      | 17.1    | 25      | 38.1    | 39      |

Source: Compiled from CSA (2011); MoFED (2010) & UNDP (2015)

The educational sector has indeed, undergone impressive expansion in recent years through the growth of both formal and informal education programmes. Although the state has consistently increased its expenditure on education, this is not equal across regions or across rural and urban areas. This leads to differences in access and coverage because of different social, cultural, and economic ways of life, and the

commitment of state institutions at different levels. This disparity is much more pronounced in secondary education enrolment. Much of the bottleneck in secondary school enrolment is due to the urban concentration of these schools. Ethiopia's predominantly rural population is not well served by the existing urban concentration of secondary schools due to different factors, including the physical distance of these schools. However, the largest proportion of recurrent expenditure at the *woreda* level is allocated to primary education, which is in line with the government's commitment to realise equity and universal access to basic education. Public expenditure on education has been increased and this has contributed to significant increases in the number of schools, better teacher-development programmes, and revisions of the curricula, efficient planning, and resources for schools, and the implementation of targeted interventions to increase girls' access to primary education.

There is no doubt that education is one of the most important preconditions for social and economic development, and is a powerful catalyst in the process of modernising the society. Formal education, particularly, provides the necessary skills for nation-building, improves the quality of labour and other resources, plays a part in opening opportunities for social mobility, increases the aspiration for development and changes attitudes. Hence, the Ethiopian government tried to give due attention for developing and implementing workable education and training policies supposed as an important lever for enhancing productivity and production, as well as employment generation. The country has made significant progress and has successfully reached the gross enrolment ratio in primary education, meeting other middle-income countries, although the overall education profile remains relatively low (World Bank, 2015).

However, the largest proportion of capital expenditure for education is allocated to secondary education, higher education and technical, vocational education and training (TVET) institutions. For instance, until 2002/03 there were only two universities and few colleges at national level. After the country adopted the developmental state model, the state paid due attention to human capital development and aggressively expanded its higher education institutions. By 2004/05, there were eight public universities, and today this number has increased to 33 universities. Furthermore, the government plans to build another 13 new universities in the coming five-year period (medium-term plan from 2015/16 to 2019/20) to achieve the standard of one university per two million people on average. In addition to universities, there are hundreds of colleges and TVET centres (both public and private) throughout the country, which provides trainings for the youth, equipping them with theoretical and practical skills to grow a middle-level labour force for the economy. This huge public investment in education indicates how the Ethiopian state understood the role of human capital development for efficient and innovative development processes.

More recently, the policy directive has expanded secondary school enrolments, and focused on science and technology at tertiary level, which will expect to have significant spill-over effect for the emerging economy. Skill development has been given top priority because ultimately it is central to both capability enhancement and national prosperity. However, progress in education has encountered several challenges. The first is that the quality of education has been deteriorating; however, the government is now trying to improve this

through school-improvement programmes financed under the General Education Quality Improvement Programme (GEQIP). This programme aims to improve educational quality by creating conducive school environment through teachers' development programmes, curricula support, and improved management planning and budget capacity. Secondly, budget allocation should be channelled into quality improvement, such as the upgrading of school facilities, but operational budget constraints are pivotal. For instance, about 35% of the recurrent budget for primary education is funded by external aid, a trend that may not be sustainable in the long-term (MoFED, 2013).

Whatever the challenges in the provision of basic social services and the extent of problems in this sector, Ethiopia needs to build continuously its human capital to achieve national prosperity. Having enough amount of human capital in the economy supposed to create new opportunities for absorbing innovative technologies and knowledge. In addition, economic growth could be more stable and sustain because of investment in human capital, which is critical for an innovative approach to diversifying and transforming the economy. In general, committed political leadership and a competent elite bureaucracy, accompanied by well-functioning context-specific institutions should be at the centre to ensure balanced socio-economic growth in urban and rural areas in all regions.

#### ***4.7.2 The role of the state in augmenting agricultural-extension services***

Agriculture is the backbone of the Ethiopian economy and underpins inclusive and broad-based growth. Under the ADLI long-term development strategy, agricultural growth is expected to spur industrialisation through backward and forward linkages. Moreover, agricultural development is part of a broader rural development strategy, including rural-infrastructure development, expansion of education and improved health services. The ADLI thus provided the guiding framework for successive medium-term development plans (Dorosh & Rashid, 2013). The agricultural sector requires better technologies to boost productivity and to raise farm income at the household level. Extension services are crucial to demonstrate the value of new agricultural technologies to farmers, and to teach them how to use these and eventually scale them up at the community level (Chang, 2009).

The agricultural extension services are critical for enabling farmers to obtain information and technologies that can improve their livelihoods, and are an important factor in promoting agricultural development. From a development policy perspective, investments in extension services are essential for improving agricultural productivity and increasing farmers' income (Anderson, 2007) through improved agricultural technologies and better practices. Farmers who are targeted by extension services need to undergo a certain process before they can achieve improved productivity and production. The process includes awareness, knowledge, adoption of technology and changes in the farmers' productivity (FAO, 1997).

Most extension models have common characteristics such as addressing farmers without restrictions, using mass-communication methods, extending agent-farmer and farmer-to-farmer relations and placing

professional extension workers at village level (Anderson, 2007). However, many agricultural extension services in developing countries have been poor in quality, underfunded and have suffered from poor coordination with agricultural research. Extension services are effective when farmers can absorb new knowledge and even make further incremental improvements (Chang, 2009). Therefore, extension systems need to expand beyond the transfer of technology for producing major food crops to achieve short-term national food self-sufficiency and food security. As developing countries achieve rapid economic growth, consumption patterns begin to move towards higher-value crops and livestock products. Increasing both domestic- and global-market demand creates many new economic opportunities for smallholder farmers to increase their income through greater productivity and production (Swanson, 2009).

Ethiopia's development policies are considered geared towards achieving rural and agricultural transformation, which puts smallholder farmers at the centre. Public expenditure on agriculture and rural development accounts for about 16% of the annual government budget, which is among the highest rates of spending on the continent, where only seven African countries have allocated 10% of their annual budget. This implies that Ethiopia might have the largest state involvement in the agriculture sector from any country in the African continent (Davis et al., 2010; Bill and Melinda Gates Foundation, 2010). The government's commitment to building rural roads, irrigation infrastructure, health posts and centres, schools, provide potable water, supply of credit and other basic infrastructure/services are supposed to be vital to accelerate rural development programmes. Some of the benefits of the extension services include: (1) 'Achieving national food self-sufficiency and food security through technology adoption and transfer. (2) 'Increasing farm income through a more market-driven extension strategy that will enable farmers to intensify and diversify their farming systems'. (3) 'Empowering farmers by getting them organised into groups (social capital) based on common interests, to gain more efficient access to both inputs and markets'. (4) 'Promoting sustainable natural resource conservation and management practices to address soil fertility, land degradation, and other major problems' (Swanson, 2009).

Under the agricultural extension programme, the government has increased the number and educational level of development agents (DAs) at agricultural colleges/TVET centres, and through the establishment of FTCs as demonstration centre at village level. These extension and training programmes are designed to enhance farmers' capacity to use improved agricultural technologies, including the efficient use of water resources, and to build community-level institutional arrangements necessary for effective water-resource management. To realise these basic benefits, the state has assigned three DAs to each rural village to look after crop production, livestock, and natural-resource management. In addition, one veterinary worker is assigned to every three villages (*tabias*), as well as cooperative agents and one irrigation professional where these villages have access to irrigation infrastructure. The government also provides key physical agricultural inputs for farm households, because some of these inputs require huge public investment. Overall, the country has assigned about 60,000DAs (see Table 4.8) throughout the rural villages. Given that, there are approximately 21.8million adults (aged 18–65years) who are active in agriculture, and there is roughly one

DA for every 476 farmers and this is one of the highest ratios in the world. Moreover, the government shows its commitment to expand further this strong agricultural field extension presence and to diversify the services aimed to become one of the most intensive systems in the world (Davis et al., 2010).

**Table 4.8: The ratio of development agents (DAs) to farm households**

| Indicators/countries   | Ethiopia | China | Indonesia | Tanzania | Nigeria | India |
|------------------------|----------|-------|-----------|----------|---------|-------|
| Total no. of DAs (000) | 60       | 800   | 30        | 7        | 5       | 60    |
| Farmers per DA         | 476      | 625   | 1 667     | 2 500    | 3 333   | 5 000 |
| DAs per 10 000 farmers | 21       | 16    | 6         | 4        | 3       | 2     |

Source: Adapted from Davis et al. (2010)

The government acknowledged the need for enough trained human resources for the extension programme to continue in order to bring high rates of adoption of improved agricultural techniques to boost productivity. The plan to use the agricultural TVET centres to train DAs has been in place since early 2000. In addition, more than 10 000 development hubs or farmers training centres (FTCs) at the village (*tabia*) level have been created to enable the delivery of extension services. The FTCs are community centres where farmers receive information, training, demonstration, and advice related to their farming livelihood. These are managed at the village (*tabia*) level and funding for capital and operational costs come from the *woreda* administration. The FTCs are at different performance levels within the regions, as well as within in the *woredas*, but they are generally considered by the government as a strong public asset base on which the country can build and to reach out the rural community or smallholder farmers. This opens an opportunity to establish world-class extension service in the future by focusing on building the skills and capabilities of the DAs, and equipping the FTCs with the necessary technologies and equipment.

The FTCs have the potential to be effective revenue-generating and teaching tools to demonstrate to farmers how they can increase their farm incomes. Some of these FTCs are introducing technical and market-driven innovations to farmers, such as ‘zero grazing’, which accelerate the fattening of livestock and allows for the efficient collection and use of manure for organic fertiliser and cooking fuel (Davis et al., 2010; Bill and Melinda Gates Foundation, 2010). Consequently, those who considered as model farmers by government are using more intensive production methods; they are changing their farming systems to include double cropping, and they are beginning to produce different high-value crops and livestock products. Most model farmers are keen to change and they see the extension programme as the primary source of information, training, and advisory services, which can help them to increase their farm income.

To strengthen agricultural extension services and overall rural development, the government has established a farmers’ movement in the main development fronts, such as in agriculture, education, and health, which is known as ‘developmental army building’ (*Yelimat serawit ginbata* in Amharic). Model farmers are selected based on criteria such as raising productivity and production, producing more than twice a year using irrigation technology, relative wealth status, supporting and encouraging other neighbourhood farmers,



participating in and being at the forefront of community development, and having the ability to maintain relations with local authorities (Chinigò, 2014). Since 2011, the developmental state has encouraged the establishment of micro-institutions below village level to rationalise development interventions, input distribution, and enable farmers to share their farming practices. As Chinigò (2014) explains, there are at least two types of farmers' organisations. The first is the 'developmental army' (*Yelimat serawit* in Amharic) in different development fronts. The developmental army is a group of farmers that comprised 25–30 neighbourhood farmers who are tasked to promote social, economic, and political development. The second type comprises one to five networks, where one of them is the model farmer, who is recognised as their representative. These groups help to improve the local government's ability to serve farmers and spread development opportunities to individual farmers.

To motivate the farmers, yearly farmers' festivals are organised at district (*woreda*), regional and national levels to award the best-performing farmers. In addition, best-performing DAs, agricultural researchers and other stakeholders who support the agricultural sector are part of the award and motivation in this annual farmers' festival. This motivation is provided by the state aimed to boost the agricultural sector, and to encourage other farmers and stakeholders to exert their development endeavours. In Ethiopia, extension services are provided primarily by the public sector and they operate in a decentralised manner, whereby the extension programme is implemented at the *woreda* and village levels under the Office of Agriculture and Rural Development, the Farmers' Cooperative Agency and the FTCs. The extension services emphasise technology adoption and modern agricultural inputs, boosting productivity and production, and livestock and natural-resource management. The main objectives are to improve farm-household incomes by increasing productivity, ensuring food self-sufficiency and food security, promoting farmers' organisations like the Farmers' Cooperative Association and water-users' associations, increasing production of export crops, conserving natural resources, and promoting inclusive participation in rural-development programmes.

Both the domestic and international markets for different high-value agricultural products are increasing rapidly and these changes in market demand offer new opportunities for smallholder farmers to increase their income and improve their rural livelihoods. These new, high-value crops and livestock products are also more labour-intensive, so these enterprises can create new employment opportunities (Swanson, 2009). Furthermore, empirical evidence from India and other Asian countries shows that agricultural extension systems that facilitate the innovation of farmers to produce market-driven products play a significant role in increasing farm income, improving rural livelihoods, and accelerating the agricultural development process (Singh et al., 2006). Hence, Ethiopia's focus on extension services is almost coincided with the practices in the developing countries in Asia.

However, this does not mean that the extension service sub-sector is free from constraints and that all farm households' benefit equally. Like other social development sectors, there are differences among regional states, *woredas* and villages in terms of expenditure, performance and commitment by stakeholders, and agro-ecological disparities. Although spending on agriculture extension at the *woreda* level increases the use

of improved farming techniques for all groups of farmers, in contrast to education and health, the impact is relatively low in the bottom quintile. This may reflect financial constraints in purchasing and investing in improved techniques (World Bank, 2014b; Khan et al., 2014). Among other things, input prices of modern farming technologies are a major constraint for poorer farmers. The state could address these constraints by improving access to rural finance through the expansion of rural credit and saving institutions, as well as credit cooperatives (Ragasa et al., 2012).

#### **4.8 Discussion, synthesis and summary**

The success of the East Asian developmental states attributed to committed political leadership, strong bureaucracy, and state institutions. The political wing in these countries gave relative autonomy to civil servants or the state bureaucracy to decide on economic issues and, as a result, these bureaucracies were able to put these countries on a path of unprecedented economic growth and transformation (Asayehgn, 2012). The role of the state is critical so long as there is committed leadership, selflessness and highly efficient bureaucratic structures, and institutions devoid of rent-seeking behaviour. In Ethiopia, the developmental state has tried to include civil servants in the process of eradication of poverty and transformation of the nation. Moreover, the civil servants are playing their role in building the developmental army in major development fronts at the community level. However, the link between the civil servants and the public are weak and have not yet reached the levels achieved by the East Asian developmental states, and considerable effort is needed to strengthen the linkages at all levels (Asayehgn, 2012; Melke, 2013).

If Ethiopia desires to use the state bureaucracy as a vehicle to tackle the deep-rooted developmental problems, it needs to improve the public administration sector, which could make the employees from the various institutions politically neutral and professionally competent. A recent World Bank study on the public-sector reform programme in Ethiopia reveals that there has been an overall improvement across the various levels of government bureaucratic institutions (World Bank, 2013b). Civil servants who manage the bureaucracy have clearly divided functions, partly they are recruited based on meritocracy, and they have improved their skills through various experiential learning seminars and training to upgrade their professional standards and skills (Asayehgn, 2012). However, it is difficult to conclude that the institutions within which the various functionaries operate (bureaucratic institutions) are completely autonomous and free from the influence of the ruling elite in practice. In particular, the higher positions in many governmental departments are assigned according to an ethnic-based quota system. Thus, the ethnic based politics of the country is considering as one of adverse factors to the autonomy of the state bureaucracy and structurally weaken its functions (Jebena, 2015). As a result, the bureaucratic institutions and the bureaucratic elites who design and manage short and long term plans of the country are not politically neutral, rather they are highly influenced by the ruling elites/politicians (Asayehgn, 2012; Jebena, 2015).

This implies that Ethiopia has not yet reached to the levels of Botswana and Mauritius, or the East Asian developmental states, though these countries are relatively homogenous in terms of culture, ethnicity and

other aspects in comparison to Ethiopia. However, without competent, merit-based bureaucracy, the country faces failures in implementation of development projects and exposed to the rent-seeking and corruption practices (Jebena, 2015). As Johnson (1982:316) states, “the political system of the developmental state covertly separates reigning and ruling: the politicians reign and the bureaucrats rule”. This Johnson’s statement indicates that the politicians should provide enough space for the bureaucrats to rule by controlling/managing special interests for the benefit of the masses, as well as give emphasis about the importance of the bureaucracy for the development process. However, there is no country in the world that has ever succeeded in achieving this in practice and the political elites are always in a position to influence the bureaucracy, like what we have been stated the case of Ethiopia.

Ethiopia’s overriding national challenge is to end extreme poverty and social inequalities based on contextualised development policies and strategies. To realise this, it is necessary to develop a competent state bureaucracy and an autonomous institutional environment, which would be less likely to be influenced by the ruling political elites and interest groups. In addition, Ethiopia is tried to making a tremendous effort to build steady and inclusive<sup>44</sup> capitalist economy and it has tried to ‘crowd-in’ the private sector (which considered to play a pivotal role for sound economic growth/development), as well as combat poverty and achieve near full employment. Ethiopia shifted away from the non-context-specific, neoliberal development approach, because it recognised the need for a capable context-specific developmental state to facilitate the development process of the nation. Active state intervention is desirable to allocate public rents (public resources) in a productive manner for the betterment of the people and to transform the economy by creating an environment that would be conducive for business to all stakeholders in the economy. Leadership commitment and ability to mobilise resources for building a national consensus is considered as one of the essential elements of the developmental state. However, in the case of Ethiopia political differences are chronic, which impede for the possibility of creating national consensus on all major issues. Of course, many of the differences are fundamental to the views of different political groups on issues such as ethnic federalism<sup>45</sup> as a political arrangement, the appropriateness of developmental state as an ideology, the democratisation process of the country, conditions of human rights and political freedom, etc. (Jebena, 2015).

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<sup>44</sup> Inclusive growth is a concept which advances equitable opportunities for all economic participants (economic agents/actors) during the process of economic growth with benefits accruing to every section of society. That means, assuring economic security and welfare for all human beings (Jacobs et al., 2017).

<sup>45</sup> Ethiopian ethnic federalism includes ethnically defined national citizenship, self-administration on an ethno-linguistic basis as enshrined in the constitution, ethnically defined political representation and decision making at all administrative levels. In fact, the ethnic federalism is a clear break with the past, which allows people to be involved with and understand local government. However, the lack of clarity and incompetence among the lower level hierarchy of government structure is remaining serious challenge (Jebena, 2015).

National consensus in a country like Ethiopia, where there are diverse ethnic groups, is paramount and essential<sup>46</sup> but it is not an easy task to attain it in the short-run. This is due to the existence of diverse/heterogeneous characteristics (in terms of ethnicity, religion, culture, social structure, politics...) of the nation it would be difficult to build a national consensus in majority of the issues (Balema, 2014; Jebena, 2015). Given these challenges, to realise national consensus on major issues, the Ethiopian state should encourage the involvement of the community or the citizen in all development aspects, make sure that all economic agents/actors are get equal opportunity for development and receive proportionate share from the fruits of the development process. The Ethiopian state has tried to build a national consensus to fight against poverty, and conserve natural resources through soil and water conservation campaigns to build a green economy. However, there are still challenges because there are individuals or groups that move against the planned direction of the state and as a nation, further efforts are needed to narrow down the gap and accelerate the project of transformation. One of the mechanisms to narrow down these gaps are by accelerating the development process and improving the well-being of the masses through creating equal development opportunities for all. In addition, creating a broad cross-section of ties between the state and society helps to boost the participation of citizens in planning, implementation, and evaluation of the development process at different levels.

To transform the ‘pervasive rent-seeking political economy’ to more ‘value-creation conducive’ situations, to accelerate development and ensure that the citizenry benefits from the fruits of this are considered as the key tasks by the Ethiopian developmental state (Zenawi, 2006; Ohno, 2009). The adoption of a context-specific developmental state ideology, nurturing context-specific institutions and policy instruments could consider to curtailing rent-seeking and promoting value-creation practices. Creating a national consensus is essential to make the general population patriotic and rally behind the developmental strategies. Accordingly, the state tried to invest large amount of public funds for building basic infrastructure, as well as to provide basic social services to create an environment that is conducive to the development process. Although further progress is needed, Ethiopia tried to achieve a substantial expansion in energy, road, railways, and telecom infrastructure, as well as provision of basic social service sectors (such as in education, health, potable water supply and sanitation) yet. The public investment rate rose from about 5% of GDP in the early 1990s to 20% of GDP in 2011—the third highest worldwide (World Bank, 2013b). For instance, power generation capacity increased from 473MW in 2002/03 to about 4200MW in 2015/16. The federal and regional road network increased from 26500km in 1997 to 100,000km in 2015. Railway lines connecting Addis Ababa with the Port of Djibouti are completed and a Light Railway line in the capital is now operational (World Bank, 2016). Indeed, implementing these pro-development policies has supposed by

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<sup>46</sup> Creating nationalistic attitude is important for a developmental state to make the general population rally behind government policies and strategies. This implies that patriotic attitude of the mass is one of the core values of people in developmental state. For instance, a developmental state of South Korea is well explained by the existence of such kind of social capital, which has now brought about what is called “Miracle at the Han River” (Kebede, 2015).

the government as the biggest catalyst in the nation's high growth rates, and has laid the foundation for national consensus on the need for sustainable development to eradicate poverty.

The state tried to invest substantial public resources for the development of basic infrastructure to accelerate the development process. The expansion of infrastructure supposed to create an environment conducive to the private sector to invest in the productive sectors, which is considered by the government as indispensable in terms of creating decent employment opportunities and boosting level of export. The private sectors also invest substantial amounts of resources in social sectors (education and health) to strengthen the country's human capital capacity to manage resource rents and the efficient utilisation of these resources to diversify the economy. However, Ethiopian government has struggled to build the necessary human capital and physical infrastructure but the government should not yet invest more in R&D, and science and technology to satisfy the required human capacity to accelerate industrialisation and sustain economic development. Ethiopia should learn more from the East Asian countries industrialisation process, which has been driven by learning processes, borrowing technologies and an array of policies, including targeted taxation, protection of domestic industries, increase the supply of skilled and educated labour forces to the economy, and the development of infrastructure.

In Ethiopia, the demand for energy has increased dramatically due to the boom in economic growth/development. For instance, up to 2010, over the first decade of the twenty-first century, the demand was on average 10.7% per year but since 2010 onwards this demand increasing up to more than 20% per year. The major drivers of this growth demand in energy in the near future include expansion of the industrial sector, irrigation projects, a new national railway network and urban light railway system and the country's implementation of the UN's Universal Electricity Access Program (Kahsay et al., 2015). Hence, to sustain economic growth and meet the growing demand for energy, the government considered further investment will require for the development of the country's energy sector by both the government and the private sectors. The expansion of the energy sector has to considered having a positive spill-over effect and has helped to facilitate the transformation of the economy from being dependent on agriculture to the broader productive industry and service sectors. Since it supposed that Ethiopia's energy has generated mainly from renewable resources (i.e. hydropower, wind, solar and geothermal) this is facilitating its green economic development goal and enabling it environmentally sustainable. The country is constructing several hydroelectric dams to generate enough electricity to meet the increasing national demand and to produce a surplus for export to neighbouring countries. For instance, the Grand Renaissance Dam on the Blue Nile has become the symbol of the nation's green economy strategy based on the development of renewable-energy sources (Balema, 2014). Major infrastructure projects, such as the Ethiopia Grand Renaissance Dam, are implemented to symbolise a new and modern era for the country (World Bank, 2016). This does not mean that such a big hydropower project is free from different socio-economic and environmental impacts like other mega projects somewhere else (see Box 4.1) but what is required is tried to minimize such impacts via conducting appropriate feasibility study.

The green development process will encourage the shift from resource exploitation and harsh ecological impacts to a more long-term sustainable and environmentally friendly development process (Swilling, 2010). However, there is abounding evidence to show that the challenges and existential threats posed by ecological imbalances cannot be effectively managed, or addressed only by market mechanisms (Jacobs et al., 2017). Consequently, Ethiopia has tried to put considerable efforts into building a green economy via its relative huge investment in the renewable-energy sector and in sustainable watershed/natural-resource management programmes (FDRE, 2011). For instance, natural resource conservation (large-scale soil and water conservation practices) has been given due priority in the consecutive mid-term five-year development plans including the GTP-I and the GTP-II because it supposed to play a crucial role in ensuring sustainable development (UNDP, 2015). The major activities related to natural resource conservation are physical and biological soil conservation, agro-forestry practices, area closure and afforestation, rehabilitation of degraded remnant forest areas through enrichment planting and enclosure by local communities, and the upgrading of the existing national parks and the establishment of new national parks (Ministry of Environment and Forest, 2014). Other advantages of building a green economy is that it utilises local resources more effectively and creates employment opportunities because it is more labour-intensive than traditional fossil-fuel-based economic activities. A green economy creates more equitable and inclusive economic growth, which is critical for poverty reduction.

The developmental state in Ethiopia has started to play a crucial role in the economy by providing basic social services, investing in pro-poor and pro-growth economic sectors, promoting equitable resource distribution and responding to the market failures through its selective public-investment intervention. For instance, as Table 4.5 indicated that more than two-third of its annual budget is supposed to allocating into the pro-poor and pro-growth sectors (CSA, 2011). Although the absolute income inequality or socio-economic differences getting wider and wider, particularly in the urban areas, the relative income inequality is relative low, i.e. the Gini coefficient of the country is about 0.3 (UNDP, 2015) in comparison to South Africa and Botswana, which their Gini coefficient is greater than 0.6. Furthermore, it has tried to build a competitive economy by encouraging the growth of private-sector enterprises; boosting public investment in infrastructure and institutions to create conducive investment environment; promoting economic diversification and creating employment opportunities to address unemployment and inequalities, as well as the existing abject poverty. This is a kind of economic rent distribution is important for the accumulation of social, physical, and human capital, which is pivotal in accelerating economic growth, increasing returns to scale in the economy and improving the standards of living. Therefore, a developmental state is able to direct the development process by creating an environment conducive to the private sector and allocation of public resources in effective manner. This indicates that the state can be supposed to play a significant role in maintaining competitiveness to use public resources (physical and human) efficiently to fulfil the national interest.



The effort to build a developmental state is facing serious challenges at its infant stage though the country has made significant progress at different socio-economic aspects. The challenges particularly emanate from weak bureaucracy [due to the recruitment criteria based on ethnic quota and political affiliation (particularly at a higher positions), instead of meritocracy], absence of national consensus on all major national issues (due to ethnically polarized politics), and lack of strong institutions that assure the practical execution of policies and strategies (Asayehgn, 2012; Jebena, 2015). In addition, unemployment and absolute inequalities or socio-economic difference between urban and rural areas are getting worse since recent times regardless of the efforts exerted to reduce them, which caused instability in different parts of the country (Lavers, 2016). Some of the challenges that need to be addressed to sustain the pace of the current economic growth includes:

- ➡ The existence of extreme differences in political-economy ideology among the political parties impeded the possibility for creating national consensus at different levels on major issues. One of the characteristics of the Ethiopian political landscape is the diametric differences on almost all-important national issues, which are so strong and emotionally charged that political dialogue among the political elites is barely possible.
- ➡ There have been various arguments from different scholars and political commentators with regard to the officially claimed developmental state by the ruling elites. On the one hand, some strongly argued whether the current Ethiopia is really a developmental state by highlighting the persistence of deep-rooted poverty in the country. Others agreed with the developmental ideology the country as developmental, but strongly doubtful whether the developmental state of Ethiopia is democratic by fingering abuse of power by government officials and ignorance of basic democratic values such as freedom of press by the ruling party. Hence, more than a decade after the ruling party has officially claimed the developmental state model; there is still fierce debate and disagreement continuing on such basic issues: What is a developmental state? Is developmental state relevant to Ethiopia? What type of developmental state should Ethiopia follow? Which country should be a model for Ethiopia to learn from; and so on (Jebena, 2015).
- ➡ Although a committed, capable and politically neutral bureaucracy is one of the critical components for building a successful developmental state, there is a lack of politically neutral and professionally competent state bureaucracy in Ethiopia. This implies that, lack of ‘embedded autonomy’ of state bureaucracy due to excess interferences of the ruling party on the state bureaucracy. For instance, the higher positions in many governmental departments have assigned according to an ethnic-based quota system and political affiliation to the ruling party (Asayehgn, 2012; Jebena, 2015).

- ➡ Widespread corruption and rent-seeking<sup>47</sup> in both the public and private sectors and a lack of good governance add to the concerns about the accountability and transparency of the political leadership. The state has failed to contain effectively the corruption and rent-seeking behaviour/practice that is overrunning the state apparatus at an alarming pace. As a result, many development projects have not been implemented adequately on time and the policy outcomes have been negatively affected (Asayehgn, 2012). Because of the ruling party and the government might not have been taken serious measures on corrupt and rent-seeker officials at different levels, anti-government protests upraised in a year 2015/16 because of rent-seeking and corruption getting systemic at different levels of state apparatus.
- ➡ There is confusion between the political and developmental goals and the existence of incompetent state bureaucracy at different levels (particularly at middle and lower levels of the bureaucracy), and growing individual and group interests contest the effective implementation of the development policies at the grassroots level. In short, there is a lack of national consensus on the ideology of the developmental state itself in general and the major development projects in particular.
- ➡ Nepotism and favoritism are already widely spreading as customary practices in most of the government institutions of the country. This would undoubtedly threaten the actual implementation of the developmental state model in Ethiopia. Merit-based recruitment systematically discouraged and considered as a supplementary rather than main criterion by many of the institutions of top leaders and managers. Due to the prevalence of rent-seeking and corrupt behaviour, commitment to public interest is hardly in existence. Besides, because of lack of adequate knowhow about the concepts and benefits of developmental state model among the public servants, in addition to the prevalence of rent-seeking and corrupt behaviour, loyalty in the execution of policies of the government by the public servants is not as needed as required<sup>48</sup>.
- ➡ Although the state perceived does not have a problem articulating mid- and long-term development plans, the state admitted that there are challenges in implementing these within a given period. Many fruitful development projects (for instance, hydropower, irrigation dams, sugar factories/plants, roads, railways and other relevant projects) have been delayed more than the expected because the state functionaries lacked the professionalism and commitment needed to mobilise the existing limited resources of the nation for development (Asayehgn, 2012; Jebena, 2015). This means that intended plans and programmes have not been fully implemented due to lack of capacity and resources (financial, capital and technical capacities).

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<sup>47</sup> Those in power perpetuate corruption whereas everyone else in the community on the other hand perpetuates rent-seeking. Both are considered as the main enemies of economic development, a country's political and economic health. Ethiopia like any other developing country around the world is facing both enemies at the moment and the Ethiopian state showed its commitment to fight them though the outcome will be seen sometime in the future.

<sup>48</sup> <http://hornaffairs.com/en/2017/02/01/ethiopia-public-service-in-developmental-states>

- ➡ The creation of job opportunities, especially for the educated youth, unequal growth between urban and rural areas (for instance, poverty is high rural areas than the urban areas) are remaining a serious challenges for the Ethiopian Economy (CSA, 2011). Furthermore, the impact of climate change resulting in weather variability and droughts (for instance, the 2015/16 drought caused by the El-Niño phenomenon affected the economy in general and the agriculture sector in particular negatively through reductions in food production). As a result, the Ethiopian economy grew by 8% in 2015/16 due to the recent drought affecting agricultural production with a negative spill-over effect on the trade/export sector (World Bank, 2016).
- ➡ Rampant corruption reigns in the country and riots are proliferating where youngsters are expressing their concerns and frustrations on the emerging problems such social inequality and unemployment. Therefore, because of such social inequalities, high unemployment rates in both the urban and rural areas and abject poverty that are continuing as the major challenges of the Ethiopian economy and have considered as the major causes of the recent anti-government public protest.

While facing these and other challenges in practice, the political elites of the ruling party has been officially advocated/claimed that Ethiopia is one of emerging developmental states in Africa. As a result, evidences confirmed that Ethiopia has progressed from having one of the lowest-levels of human capital development and highest poverty rates in the world to relatively impressive economic growth/development. The poverty level in Ethiopia has decreased significantly because of the considerable pro-poor and pro-development public-intervention programmes in the economic and social sectors (CSA, 2011; 2012).

Accordingly, the share of population living below poverty line in Ethiopia has declined from 45.5% in 1995/96 to 29.6% in 2010/11 (CSA, 2011; World Bank, 2012). This level of poverty further reduced to 27% 2012/13 (World Bank, 2013b; MOFED, 2013; 2014) and furthermore the proportion significantly declined to 23.4% by 2014/15 (UNDP, 2015). As a result, life expectancy has increased from 48 to 63years (World Bank, 2013b; 2016; UNDP, 2015). For instance, about one million poor people have been lifted out of poverty only in year 2012/13 (MoFED, 2014). Although proportion of people living below absolute poverty (both in rural and urban areas) has reduced, there are still about 22.6 million poor people in Ethiopia as of 2014/15 (MoFED, 2014; UNDP, 2015). Economic growth in general has been an important driver of poverty reduction in Ethiopia in the last decade (2003/04 to 2013/14). In Ethiopia, each 1% of growth in GDP resulted in 0.55% reduction in poverty. In particular, agricultural growth was also an important driver of poverty reduction in Ethiopia over the same period. For every 1% of agricultural growth, poverty was reduced by 0.9% compared to 0.55% for each percentage of overall economic growth (World Bank, 2016). However, economic growth is a necessary condition for poverty reduction, food security and employment but it is not a sufficient condition; therefore, economic growth to be poverty reduction, growth has to be more pro-poor (UNDP, 2015).

Ethiopia has supposed by the World Bank and IMF as one of the fastest growing countries in the world and, in many respects; its growth has been different from other emerging African lions. Firstly, it has achieved remarkable economic growth without extracting/exploiting its natural resources of course this not unique for Ethiopia because there are countries achieved similar economic growth without having enough amount of natural resource to be exploited. Secondly, Ethiopia is one of the African states that have reduced the level of extreme poverty by half, albeit from a high base, through its pro-poor and pro-development policies in the economic and social sectors (UNDP, 2013; World Bank, 2013b). Thirdly, there was at least a developmental-oriented political leadership, which is guided by a pragmatic vision and both long-term and mid-term, five-year development policies and strategies (Daddi, 2013). The country has made relatively spectacular leaps on multiple development fronts since the ruling party officially claimed the developmental state as a development ideology of the country (Oqubay, 2015). That means economic development registered yet is not adequate to ease the poverty-burden and socio-economic bottlenecks of the country.

For instance, though the overall unemployment rate in urban areas declined from 22.9% in 2004 to 17.4% (which is huge yet) in 2014/15 but youth unemployment (15-29years) was 22.8% in the same year 2014/15 (CSA, 2011, UNDP, 2015; World bank, 2016). Ethiopia is still one of the low-income countries with about USD632 per capita income and low Human Development Index with about 33%. It is the eleventh poorest country in the world by per capita income; almost half of the adult population is illiterate and the country's infrastructure deficits remains one of the largest in the world (World Bank, 2016). Therefore, further efforts need to be required to address the entire socio-economic problems that not sorted out yet and to reduce the number of chronically food-insecure households, or to lifting out population living below the absolute poverty line.

The practice of context specific development approaches based on the consent of the people has enabled the country to establish a stable political economy and register high economic growth by putting the agriculture sector at the forefront of the development programme of the country. However, the success of the agricultural development programmes only is not an end within the agricultural sector itself; rather it has a positive spill-over effect on the overall economic development and structural transformation. This will happen through strong rural–urban linkages (forward and backward linkages as indicated in Figure 4.3) and increasing levels of investment in infrastructure to strengthen the physical and human capital of the nation.

In general, Ethiopia has benefited significantly from the developmental state trajectory that it officially claimed by the ruling elites. The government is intervening in sectors that the private sector cannot enter totally or partially, and is involved in infrastructure development and other social-sector programmes. Even though the structural transformation is slow, social services (health, education, water and sanitation) and economic (agriculture and energy) developments have been achieved, and fast economic growth is being recorded. FDI is flowing into the country because of the pulling factors such as the existence of relative peace and stability, tax incentives and, more importantly, the availability of land and relative cheap labour forces for the labour intensive manufacturing sector. This does not mean that the officially claimed

developmental state is free from challenges rather there are different challenges in practice. The state has failed to contain the rampage of corruption and rent-seeking behaviours and practices that are threatening the governmental apparatus and having an unmitigated negative effect on the hard work to achieve political and economic development.

As a result, many relevant development projects have not been implemented adequately on time and the policy outcomes are negatively affected. Even though both the ruling party and the government are aware of the problems, the ruling party might not have whole-heartedly endorsed/taken serious measures. In addition, the government's decisions to introduce reforms might have lacked coalition support by policy advisors and technocrats (Asayehgn, 2012; Jebena, 2015). The year 2015/16 has been seen unprecedented anti-government protests across small towns and cities in Oromia regional state and latter expanded to the Amhara regional state of Ethiopia. The flashpoint (i.e. the immediate cause) for anti-government protest in Oromia regional state was the Addis Ababa Master plan that sought to expand the capital's boundaries into surrounding Oromia regional state. But the root causes for the anti-government protests that expanded latter to the Amhara region are directly related to unemployment, lack of good governance, the practice of corruption and rent-seeking practice are to mention a few of them and the outcome was very bad (Lavers, 2016). Last year's public protest/unrest was a clear indication that Ethiopians' perception of corruption and rent-seeking have exceeded the threshold of their patience. Since recent time (starting the fourth quarter of-2016) the ruling party (EPRDF and its coalitions) starting to renew themselves via 'deep renewal' (*tilik tehadso* in Amharic) at different levels to tackle/fight corruption and rent-seeking practices. This indicates that the ruling party and the government appreciate the seriousness of the matter at hand and have already started a campaign on fighting corruption and rent-seeking though the fighting of corruption and rent-seeking is still to be seen the result in the future and needs further research<sup>49</sup>. As different media outlets broadcasted, the objective of the 'deep renewal' (*tilik tehadso* in Amharic) is to address the socio-economic complexities (such as unemployment, inequality, poverty and issue of good governance) via tackling the corruption and rent-seeking practices, which are considered by the ruling party as the root cause of for the other socio-economic problems.

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<sup>49</sup> However, recent news reported by different national media outlets indicate the transfer of thousands of hectares of illegally acquired land by a handful of businessmen to a large group of unemployed youth especially in the Oromia region of Ethiopia. The government also arrested hundreds of government bureaucrats, businessmen and intermediaries suspected of involvement in corrupt practices. Among the detained government officials, some are from the Ministry of Finance and Economic Cooperation (MoFEC, the former MoFED), the Ethiopian Sugar Corporation, as well as from the Ethiopian Road Authority and Addis Ababa City Road Authority.

## **CHAPTER FIVE: GROUNDWATER IRRIGATION DEVELOPMENT AND GOVERNANCE IN THE RAYA VALLEY**

### **5.1 Introduction**

Irrigation development is considered as one of the pillars in the modernisation of the agricultural sector in Ethiopia. The government sees it as the main instrument to operationalise the long-term ADLI development strategy, which is the roadmap to transform smallholder agriculture in the country. As most Ethiopians live in rural areas and derive their livelihoods from agriculture (smallholder agriculture), the government has put agriculture at the centre of its national development plan, and its rural development strategy in particular. This strategy places a strong emphasis on increasing agricultural productivity by developing reliable irrigation infrastructure and supplying modern agricultural inputs, among others. The government recognised the seriousness of the problems in the rural economy (food security and poverty), so the overall goal of its water-resource policy is to enhance and promote the efficient, equitable, and sustainable utilisation of available water resources for socio-economic development on a national basis (MoWR, 2002). Irrigation development has been prioritised because it is seen as one of the strategies to fight poverty and food insecurity, generate income, improve livelihoods, and promote development in general, at both the household and national levels (Awulachew et al., 2007). The government prioritises irrigation development at various scales, especially in arid and semi-arid regions. Irrigated agriculture has multi-dimensional socio-economic benefits as well as possible negative consequences (i.e. negative environmental effects and social instability), depending on whether it is managed and used sustainably (Awulachew et al., 2007; Dinka et al., 2014).

In line with the national development strategy, the regional government of Tigray adopted ‘Conservation-based Agricultural Development Led Industrialisation’ and large-scale conservation efforts (check dams, stone bunds and reforestation) have been carried out, leading to reduced soil erosion and improved environmental rehabilitation. The regional state has embarked on an ambitious irrigation-development programme and put a plan in place to irrigate about 50% of the arable land (at different scales and it would be good for the regional economy if it execute as per the plan) to enhance agricultural diversification and intensification. This is achieved by carrying out intensive, public-led, large-scale soil and water conservation programmes (watershed management) in communities to prevent soil degradation, retain soil fertility, and boost the recharge capacity of groundwater/streams to improve agricultural productivity. Natural-resource conservation has been prioritised because it plays a key role in ensuring sustainable development. There is an intensive campaign to expand water harvesting and saving programmes using different irrigation technologies (both traditional and modern) and different water sources (surface, ground and rainwater). The use of water saving and efficient irrigation technologies improves the effectiveness of irrigation, thus increasing household income and reducing poverty at the household level. The federal government, as well as the regional government of Tigray, have formulated poverty-reduction strategies and a series of policy



intervention instruments to improve the food security status of farm households. For instance, substantial investment has been made in small-scale irrigation, soil and water conservation and safety-net programmes. Hence, the following research questions were addressed in this chapter:

- How has Ethiopia's conception of the developmental state, as articulated in its official development ideology and its key representatives, influenced and shaped the way in which the state has assembled the institutional arrangements and practices in the Raya Valley groundwater irrigation project?
- Is there evidence of a direct relationship between Ethiopia's conception of the developmental state and the actual institutional arrangements and practices in the Raya Valley project? What are the successes and challenges of the Raya Valley project?

Following these questions, the specific objective was to investigate the role of a developmental state and the existing institutional arrangements for the sustainable utilisation and governance of groundwater irrigation in the Raya Valley.

## **5.2 The groundwater irrigation situation in Ethiopia**

In Ethiopia, agriculture is considered an important tool in the equitable distribution of rural assets (agricultural land) to accelerate the use of rural technology and support the non-agricultural sector. Agriculture is the mainstay of the Ethiopian economy in terms of income, employment and generation of export revenue (Awulachew & Ayana, 2011). Ethiopia is dependent mainly on rain-fed agriculture, and this dependency has put most Ethiopian smallholder farmers at the mercy of meteorological variability. With increasing meteorological variability, due to climate change, it is highly probable that the rain-fed agriculture in Ethiopia will be vulnerable to its effects (Awulachew & Ayana, 2011). Irrigation development is now a key element of the government's plan to develop a climate-resilient agricultural economy to ensure national food security, eradicate poverty from the rural areas, provide raw materials for domestic industries, and generate foreign currency through exports of agricultural outputs (Negash, 2011). Ethiopia has a wealth of opportunities to increase its irrigation and food production: the country is endowed with twelve (12) major river basins with an annual surface-runoff volume of 124.5km<sup>3</sup> (MoWR, 2002; Awulachew et al., 2007). The potential cultivable land area of the country is estimated to be between 30 and 70 million hectares (Mha), but only about 15 to 16.5Mha of land are under cultivation. Its estimated total irrigation potential is about 5.3Mha, out of this about 3.7Mha of which could be irrigated using surface-water sources, another 1.1Mha could be developed using groundwater sources, and the remaining 0.5Mha could be irrigated using rainwater management (Awulachew et al., 2010; Awulachew & Ayana, 2011). Irrigation contributes to rapid transformation of the agricultural sector as well as economic transformation in general. However, if one excludes traditional irrigation, irrigated agriculture, using both surface and groundwater, occurs on only about 0.7Mha across the country (Awulachew et al., 2010; Awulachew & Ayana, 2011).

Investment in irrigation is the responsibility of the federal and regional governments, the private sector and some donor interventions. The Ministry of Water and Energy is responsible for large and medium-scale irrigation development. At the regional level, the Bureau of Water Resources and the Bureau of Agriculture and Rural Development are also involved; the former focuses on the development and operation of hydraulic infrastructure of small-scale irrigation, while the latter deals with agricultural extension and marketing issues. Small-scale irrigation is concentrated on the production of food crops, whereas large and medium-scale irrigated farms produce cash or industrial crops (Negash, 2011). Groundwater potential for irrigation in Ethiopia remains uncharted and underdeveloped due to different capability constraints; like financial and human constraints ((Awulachew et al., 2010). However, the development of groundwater, particularly shallow-well groundwater, is an important feature in the national and regional plans for small-scale irrigation development, and is a major avenue for the reduction of rural poverty. There are broad plans and visions about using the existing water resources for irrigation purpose and the government looks committed to augment irrigated plots by using different sources or technologies (Van Steenberg et al., 2015).

Groundwater irrigation has emerged as a strategy for economic growth, poverty reduction, and as a tool for rural households to adapt to the effect of climate change although the capacity of groundwater aquifers to buffer climate change depends on water storage and annual recharge (Kebede, 2010). Groundwater irrigation development is taking by the public as a means for smallholder farmers to escape from a nature-dependent (rainfall-dependent) agricultural production system. The development of small-scale groundwater irrigation is receiving attention throughout the country (MoFED, 2010) because it plays a significant role in meeting the growing demand for food and achieving long-term food security. It also fosters sustainable agricultural and economic development without severely affecting the environment through sustainable management.

The Government of Ethiopia has instituted several policies and strategies to support agricultural development and water resources development, including the Rural Development Strategy, the Water Resources Management Policy and the Water Sector Policy. These initiatives aim to enhance the efficient, equitable and optimal utilization of water resources for sustainable agricultural and socio-economic development, and place small-scale irrigation as a key priority (Evans et al., 2012:2).

There are many technologies and techniques used in Ethiopia to extract water for irrigation purposes. These include micro-dams or reservoirs, river and stream diversions, groundwater and hand-dug wells, lake and river pumping, rainwater harvesting in traditional ponds (*kurie* in Amharic), spate irrigation, motorised (treadle) pumps, and sprinkler and drip irrigation systems. In the Raya Valley, deep-well groundwater with a pressurised pump irrigation system is used to irrigate agricultural land through huge public investment. In addition, spate irrigation, which has a long history and is a common practice within the Raya community, is used to supplement rain-fed agricultural farming during the rainy season by diverting floodwater from upstream catchments through using simple furrow systems.

The use of groundwater for irrigation is generally very low in Ethiopia due to different constraints, though recently it is emerging as a mainstay of irrigated agricultural development, mainly in rainfall-deficit areas. The planning and implementation of irrigated agriculture using groundwater is encouraging, and the

government shows its commitment for investing huge amounts of resources in the form of public investment. There are, however, valid concerns that may impede the development efforts of the government including: (1) ‘The limitation of knowledge and information available on the extent of the potential groundwater’. (2) ‘The available human and institutional capacity to plan, develop and manage is limited in quantity and quality’. (3) ‘Drilling equipment and spare parts are so hard to obtain’ (Moges, 2012). Therefore, investment in institutional and human capacity development is crucial to sustain the development of groundwater resources for irrigation. It is also critical to develop community awareness on the importance of conserving and managing the resource. Doing this would help to ensure the sustainability of groundwater irrigation development, to optimise the opportunities for groundwater recharge and reuse it, and to regulate the long-term equitable use of the resource.

### **5.3 Background of the study area: The Raya Valley**

There is limited experience of exploiting groundwater resources for irrigation in Ethiopia and it has not yet converted into economic benefit in a significant manner. The development of groundwater irrigation is concentrated in Borena in the south (Oromia Regional State), the Kobo-Girana Valley (Amhara Regional State), and the Raya Valley (Tigray Regional State). These are the only implemented groundwater development schemes so far, but are expected to expand to other parts of the country (MoWR, 2011; Moges, 2012). Reviews of different studies on the groundwater conditions indicate that there is a high potential (about 1.1Mha) for developing groundwater sources for irrigation purpose in specific parts of the country. These include alluvial-fan deposits along the foot of the Great Rift Valley escarpment, flood plains and valley fills, which are regularly recharged by seasonal runoffs from the highlands. The availability of groundwater resources is determined mainly by aquifer conditions and by the climatic conditions, which result in different levels of groundwater recharge. Groundwater irrigation is often located in regions where both aquifer and climatic conditions are favourable.

The Raya Valley is one of the areas in northern Ethiopia where groundwater is believed to exist in abundance. It is an intermountain plain covering parts of the southern Tigray Regional State, which is one of the highest potential agricultural areas in the region, with good groundwater potential. The Raya Valley area has been identified/prioritised as one of the ‘*development corridors*’ by the regional state precisely because of its potential to increase agricultural productivity and production by using the groundwater potential for irrigation purpose. Despite its potential, the area has been suffering from drought due to weather variability. Currently, food-insecurity is still a challenge in the area, with most farmers still depending on relatively poor spate irrigation and rain-fed farming practices. Spate irrigation is one of the traditional practices employed by farmers in the Raya Valley to supplement their rain-fed agriculture. The Raya Valley has huge potential as an agricultural area for crops and livestock production because the low land areas of the valley are surrounded by mountains and have deep, fertile alluvial soil.



Different studies assert that the Raya Valley has a groundwater potential that can be developed for modern smallholder irrigation. Although the original study of the Raya Valley groundwater potential for the purposes irrigation dates to the early 1970s, the Relief Society of Tigray (1996) in collaboration with Tigray Regional State conducted the first intensive and integrated study of the valley. The study estimated the groundwater reserve in Raya Valley to be about 7152billion cubic metres (BCM) and the recharge potential to be about 85million cubic metres (MCM) per year (Relief Society of Tigray, 1996). Following this, the Ministry of Water Resources (2008) modelled the Raya Valley plain alluvial aquifer to determine the exploitable groundwater potential in the valley, and estimated it to be about 130MCM per year, with its total groundwater reserve at 7.2BCM. The average groundwater recharge in the project area is estimated to be about 84MCM per year. Almost all the water samples analysed from the Raya Valley are suitable for irrigation (WWDSE, 2008). Furthermore, Moges (2012) assessed the groundwater potential in the studied area and his findings were almost consistent with those of the Water Works Development Sector Enterprises (WWDSE); the groundwater potential reached about 7.2BCM. These studies confirm that the valley has a remarkable groundwater potential for irrigation.<sup>51</sup>

To tap this huge potential resource, the Integrated Raya Valley Development Programme Project or the Golgol Raya Development Project was initiated in early 2000 by the regional government. This development project views groundwater irrigation is central to integrating crop and livestock agriculture with soil and water conservation in a holistic way to ensure sustainability. This project aims to increase agricultural productivity and improve the living conditions of farm households by expanding deep-well groundwater irrigated agriculture based on a state–community managed approach. This has a direct effect on reducing the incidence of food insecurity for the rural poor by strengthening the rural households’ ability to tackle weather shocks such as drought or crop failures. Therefore, since the establishment of the Golgol Raya Development Project in the studied area, several deep wells have been drilled (see Figure 5.2) and a few of them installed with drip and sprinkler infrastructure for the use of smallholder irrigation.

The pressurised irrigation system in the studied area is economically feasible based on a cost–benefit analysis (CBA) at both the project and scheme levels (Yirga, 2011; Gebregziabher et al., 2013), indicating that farmers would also benefit from using these economically feasible groundwater irrigation schemes. The need for groundwater irrigation in the studied area emanated from the scarce surface-water resources and seasonal rainfall variability, which do not provide sufficient water for cultivation. Most of the earlier studies had been more concerned with resource development to meet the users’ water demand for irrigation than with groundwater resource management and sustainability issues. Safe groundwater abstraction and proper groundwater management are obviously crucial for the sustainability of the resource.

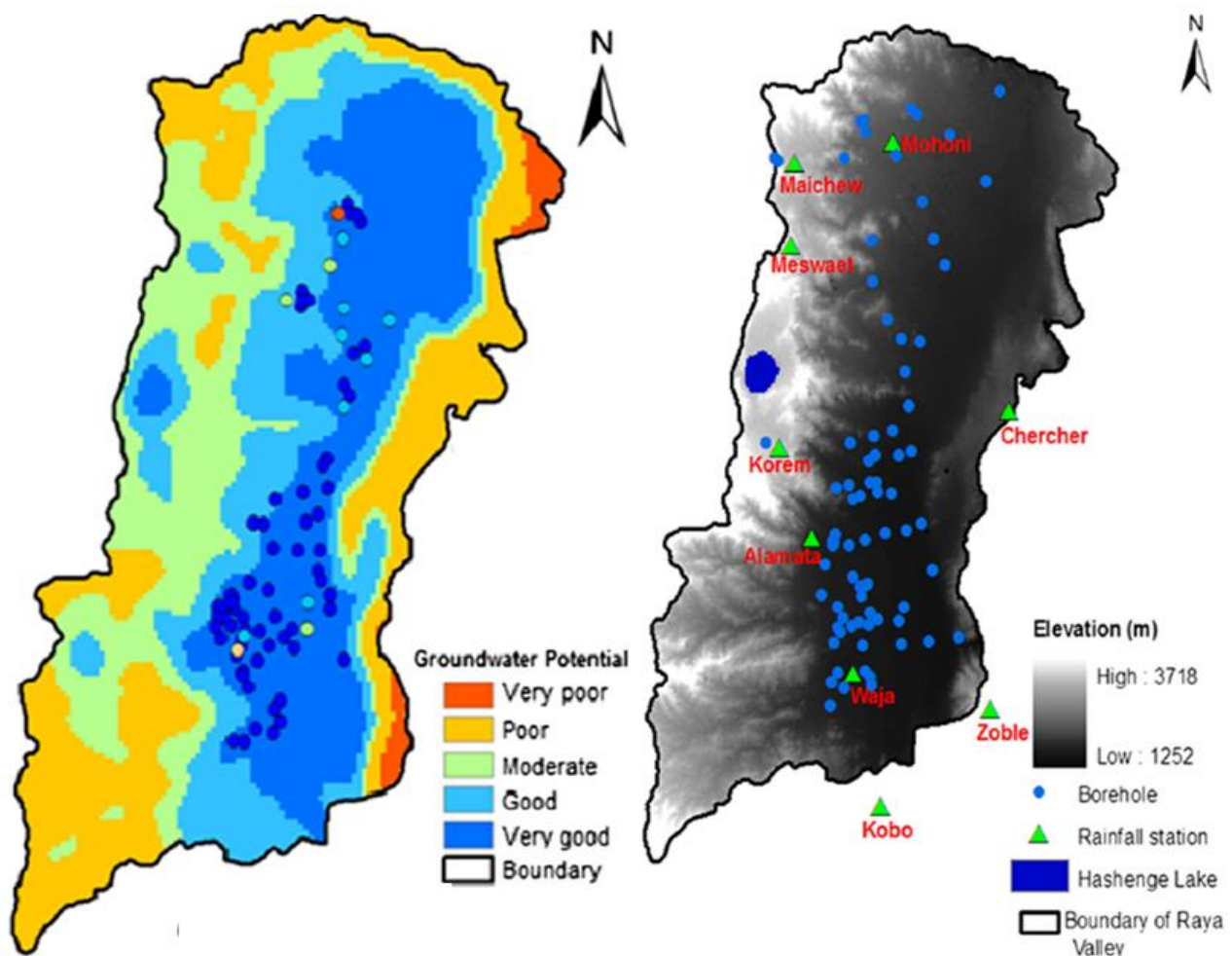
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<sup>51</sup> The Relief Society of Tigray (1996) concluded that the valley has good groundwater potential for irrigation, that could irrigate about 18 000 ha of land in the region. A decade later, the Ministry of Water Resource confirmed that about 33 900 ha of land is suitable for pressurised irrigation development in the projected area, unless limited by the availability and development of groundwater resources (WWDSE, 2008).



The use of groundwater is increasing rapidly, bringing several socio-economic benefits to smallholder farmers by enabling them to grow more crops and to minimise the impact of rainfall variability and seasonal drought. In the studied area, there are no perennial rivers and streams, except some springs at the western edge, and runoff from these springs disappears in the central part of the valley. This situation has made groundwater the primary source of water for irrigation in the valley and hundreds of deep wells have been drilled to implement modern pressurised irrigation activities. This does not mean that the distribution of the groundwater resources is uniform throughout the valley (see Figure 5.2). The studied area focuses mainly on the two main sub-basins of the Raya Valley, namely, Alamata and Mohoni, located in northern Ethiopia. These sub-basins have a high groundwater potential and a semi-arid climate. Because of low and variable annual rainfall, groundwater irrigation is crucial to mitigate the low and variable annual rainfall problems and build drought-resistant/resilience agriculture in the Raya Valley community.

**Figure 5.2: Groundwater irrigation potential, rain-gauge stations, and borehole in Raya Valley**



Source: Adapted from Fenta, et al. (2015)

The Raya Valley is characterised by a bimodal rainfall pattern with a short rainy season, *Belg* (low rainy season) from February to March, and a long rainy season, *Kiremt* (high rainy season), from June to September, with a peak in August. The spatial distribution of rainfall is governed mainly by variations in



altitude. The soil is mostly loam, silt loam or clay loam in texture with a good water-holding capacity, and the soils are deep or moderately deep, and suitable for irrigation. Diversity or variation in agro-climatic zones, soil types, and socio-economic conditions of the farming communities have contributed to the evolution of different cropping practices in the region, and particularly in the studied area. Teff<sup>52</sup> and sorghum are the dominant crops in the studied area; these are drought resistant and cover approximately 75% of the valley's cultivated land (both in Raya Alamata and Azebo *woredas*). Maize is growing in small quantities because it is sensitive to aridity, and a few vegetables and cash crops (e.g. onions, tomato, and others) are cultivated using spate and groundwater irrigation.

The livelihood of the rural population in the region, and particularly in the Raya Valley area, is directly dependent on human labour and the draft power of livestock. Livestock are considered as important components of the farming system, providing draft power for ploughing and threshing, and manure to boost soil fertility for crop production, in addition to serving as a source of food and cash income. The farmers practise mixed subsistence farming of crops and livestock, using coping strategies in times of drought or the outbreak of diseases. Farmers produce mainly for staple foods such as sorghum, teff, maize, as well as vegetables (i.e. onions and tomatoes), which are commonly produced under irrigated cultivation.

In general, groundwater irrigation would have a significant positive impact on the livelihoods of smallholder farmers. Growing high-value crops under groundwater irrigation systems would enhance the livelihoods of beneficiary farm households in the Raya Valley, which has plenty of groundwater potential to be used for irrigation. As part of their food security and poverty reduction efforts, the government of Ethiopia, and particularly the regional government of Tigray, have tried to make considerable efforts yet in invested in deep-well groundwater irrigation development on a sustainable basis by consolidating the watershed management programme to augment the recharge capacity.

#### **5.4 Demographic characteristics of sampled households**

Household characteristics such as age, sex, education, wealth status, family size and gender may affect households' decisions to adopt irrigation and other modern agricultural technologies. Households with more educated members may have greater access to non-farm income, which could enable them to afford agricultural technologies. Farmers with formal education are also more likely to be better informed about the benefits of modern agricultural technologies and may have a greater ability to use these (Pender & Gebremedhin, 2007, Kassie et al., 2011). Modern agricultural technologies include physical inputs, such as seeds or fertiliser, and new farming methods that are diffused by extension services. The technology may not be new as such, but novel to the beneficiary farm households in developing countries like Ethiopia. Experience has shown that new technology is not necessarily appropriate in every context; its suitability depends more on how well it fits into a specific agro-ecological context. For the successful adoption of new

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<sup>52</sup> Teff is an endogenous staple crop/cereal used to make *Enjera* or a pancake that is a traditional in Ethiopia.

technologies, certain factors need to be taken account, including the personal attitude of the farmer and their socio-economic characteristics, such as wealth, landholding, education, and age, as well as the agro-ecological context. Other factors include differences in the farmers' physical, economic, and social environments and their farming systems.

Based on the survey data from a sample of 226 households, the average age of household heads was 40.5years, with a range of from 24 to 68years. The average family size was about 5.13, which is slightly above the regional and national average for rural households. The survey also showed that the size of the average active labour force in the household was about 3.02, and the average number of dependent family members was about 2.09. Therefore, the average dependency ratio of the household in the studied area was 0.692. Regarding the educational status of the respondents, it was found that approximately 39.82% of the households were illiterate, while 4.42% of the respondents could read and write but did not have a formal education (i.e. they had a religious education). About 31.86% of the respondents had a primary school education, and nearly 23.5% of the respondents had access to secondary school. In total, about 59.18% of the sample households could read and write with about 54% of them having formal education (see Table 5.1).

**Table 5.1: Demographic characteristic of sample households**

| Demographic characteristics        |      |           | Educational situation |       |       |
|------------------------------------|------|-----------|-----------------------|-------|-------|
| Indictors (N=226)                  | Mean | Std. Dev. | Level of education    | Freq. | %     |
| Family size                        | 5.13 | 2.17      | Illiterate            | 90    | 39.82 |
| Male                               | 2.65 | 1.33      | Religious             | 10    | 4.42  |
| Female                             | 2.53 | 1.39      | Primary               | 72    | 31.86 |
| Adult members of the household     | 3.02 | 1.63      | Secondary             | 35    | 15.49 |
| Dependent members of the household | 2.09 | 1.54      | Above secondary       | 19    | 8.41  |
| Dependency ratio                   | 0.69 | 0.57      | Total                 | 226   | 100   |

Source: Own sample survey (2014)

Farm households equipped with formal education can increase agricultural productivity by means of boosting adoption modern farming practices. Younger farm households may be more educated or be more open to trying out new technologies than the older and illiterate households. Age and education are generally crucial factors to increase the awareness and relevance of modern agricultural activities. Adopting modern agricultural practices has a positive effect on improving the productivity of smallholder households, and increasing agricultural production can reduce poverty by increasing farmers' incomes, reducing food prices and, thereby, enhancing increments in consumption. In practice, smallholder farmers are often more efficient in the allocation and use of resources than are the large-scale farmers and, consequently, smallholder farmers are more productive. Therefore reaching out to smallholder farmers is an important component of poverty alleviation and rural transformation, and a key policy focus.

## 5.5 Farm size and land-holding arrangements of the farm households

In an agrarian society like Ethiopia, ownership of agricultural land and livestock are crucial productive assets and are prerequisites for agriculture in Ethiopia. As in other parts of rural Ethiopia, farmers in the studied area can access agricultural land through land distribution, family inheritance, fixed-rent and sharecropping mechanisms. Fixed-rent and sharecropped mechanisms mean temporary ownership of agricultural land. It is assumed that irrigated plots in the studied area are similar in terms of soil type and quality, with slight differences. On the one hand, about 85.84% of the sample households have access to land through the land-distribution system, and 12.83% of them have inherited land from their relatives. On the other, about 41.59% of the sample households have sharecropping rights and another 19.91% have fixed-rent holding arrangements. This means that farm households have access to agricultural land (irrigated or non-irrigated) through land distribution, inheritance, sharecropping and fixed-rent arrangements. Sharecropping is a common and long-term practice in the studied area and landholders share in the final output. It is customary for landholders to enter sharecropping contracts with wealthier and less liquidity-constrained tenants; in most cases, these are male-headed households that are likely to invest in productivity-enhancing inputs. Male-headed households (if not all) tend to spent more on labour and agricultural inputs and, particularly, on irrigated agriculture and better farming management practices.

Consequently, the average income per hectare of male-headed households is more than female-headed. The empirical evidence from the studied area confirmed that male-headed households invest more in groundwater irrigation and attain a greater income than female-headed households attain. For instance, labour costs for 2008/09 were 3022.2ETB<sup>53</sup> and 2448.75ETB for male- and female-headed households respectively. Agricultural-input costs in the same period were 3008.95ETB and 2145ETB, respectively, for male- and female-headed households. Likewise, in the 2008/09 production year, average income per hectare for male-headed households was about 53372.67ETB and about 41062.5ETB for female-headed households (Yirga, 2011). Factors that contribute to these differences may be due to the intensive nature of irrigated farming, which may account for why male-headed households are better equipped than female-headed households are. In addition, male-headed households may have better access to markets and other farming activities than female-headed households may.

The study showed that the average household-owned land (both irrigated and rain-fed) was about 4.1tsimad (about 1.025ha), i.e. one hectare is equal to four *tsimad* or one *tsimad* is equal to a quarter of a hectare. When incorporating both fixed rented and sharecropped plots (i.e. it is a temporary agricultural land holding arrangement), the average land holding per household increases to about 6.1tsimad (1.525ha). The average plot size of owned household land with access to groundwater irrigation is about 1.49tsimad (0.372ha), but when one adds both sharecropped and rented land with access to groundwater irrigation, this increases to

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<sup>53</sup> ETB is Ethiopian Birr, the Ethiopian currency and during the survey period (2014), the exchange rate was US\$1=20ETB.

about 2.15tsimad (0.538hectare). Farm households who do not have their own land, particularly in the groundwater irrigation project, can temporarily own land through either fixed rent or sharecropping arrangements with farming households who do not have the capacity to farm it themselves due to various constraints. Further, those that own plot can also gain temporary ownership of additional irrigated land through fixed rent or sharecropping arrangements to diversify and intensify their production, thus increasing their household income.

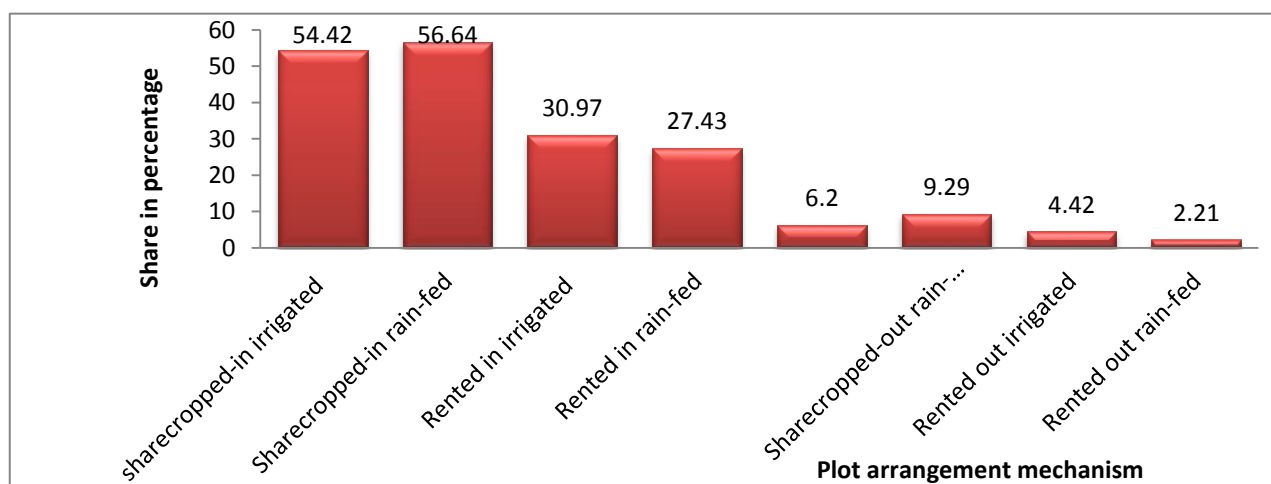
Sharecropping occurs between households with an excess ratio of land to labour or land to draft power, and those who have too little land relative to their labour and draft-power endowments. For instance, in the sample study, 54.42% of the households were sharecroppers on irrigated plots from other households, and 6.2% of landowners had sharecropping arrangements with tenants on their irrigated plots (see Table 5.2 and Figure 5.3). Sharecropping arrangements in the community are not based on relations of dominancy and dependency between tenants and landowners, but are undertaken to balance resources. There are two types of sharecropping arrangements in the studied area: (1) pure sharecropping (output sharing for rain-fed agriculture) and (2) cost sharing (input and output sharing for groundwater-irrigated plots). Sharecropping contracts are generally informal, without any written agreements, but are sometimes witnessed by a third party who is known and trusted by both the parties s involved. The duration of sharecropping and fixed-rent agreements depends on the agreement.

However, the government has set a limit of five years on fixed-rent arrangements. This is because, as per the Constitution of the country, there is government–public land ownership and farmers have unlimited use rights. They have the right to bequeath land, and to lease their land for a limited period. They also have the right to obtain compensation for their investment in the land if they lose it. But selling of land is illegal and it cannot be used as collateral for credit as per the Constitution of the country. In the case study, there were peoples who rented or leased out their irrigated plots and landowners preferred to cultivate their land themselves. The few households that did rent out their irrigated plots tended to be women-headed, and elderly or poor ones who were unable to cultivate it themselves because they lacked the necessary physical and financial capacities. The participants also noted that there was a higher demand for rented irrigated plots from wealthier farmers, including landless ones, extension workers and town dwellers, and that this pushed up the value of the land from time to time.

**Table 5.2: Cultivated land arrangement and average holding size (in *tsimad*) of the respondents**

| Plot arrangement systems    | Obs.       | %            | Mean        | Std. Dev.   |
|-----------------------------|------------|--------------|-------------|-------------|
| Owned irrigated land        | 194        | 85.84        | 1.49        | 1.24        |
| Sharecropped-in irrigated   | 123        | 54.42        | 0.8         | 0.99        |
| Rented in irrigated         | 70         | 30.97        | 1.5         | 1.05        |
| <b>Total size irrigated</b> | <b>213</b> | <b>94.25</b> | <b>2.15</b> | <b>1.42</b> |
| Owned rain-fed land         | 196        | 86.73        | 2.52        | 2.1         |
| Sharecropped-in rain-fed    | 128        | 56.64        | 2.81        | 2.71        |
| Rented in rain-fed          | 62         | 27.43        | 0.69        | 1.47        |
| <b>Total size rain-fed</b>  | <b>216</b> | <b>95.58</b> | <b>3.8</b>  | <b>3.39</b> |
| Sharecropped-out irrigated  | 14         | 6.2          | 0.66        | 0.62        |
| Rented out irrigated        | 10         | 4.42         | 0.88        | 0.86        |
| <b>Total size irrigated</b> | <b>19</b>  | <b>8.41</b>  | <b>1.29</b> | <b>1.31</b> |
| Sharecropped-out rain-fed   | 21         | 9.29         | 0.96        | 1.24        |
| Rented out rain-fed         | 5          | 2.21         | 0.2         | 0.45        |
| <b>Total size rain-fed</b>  | <b>21</b>  | <b>9.29</b>  | <b>0.64</b> | <b>1.01</b> |

Source: Own sample survey (2014)

**Figure 5.3: Sharecropped and fixed-rent land arrangement in the study area**

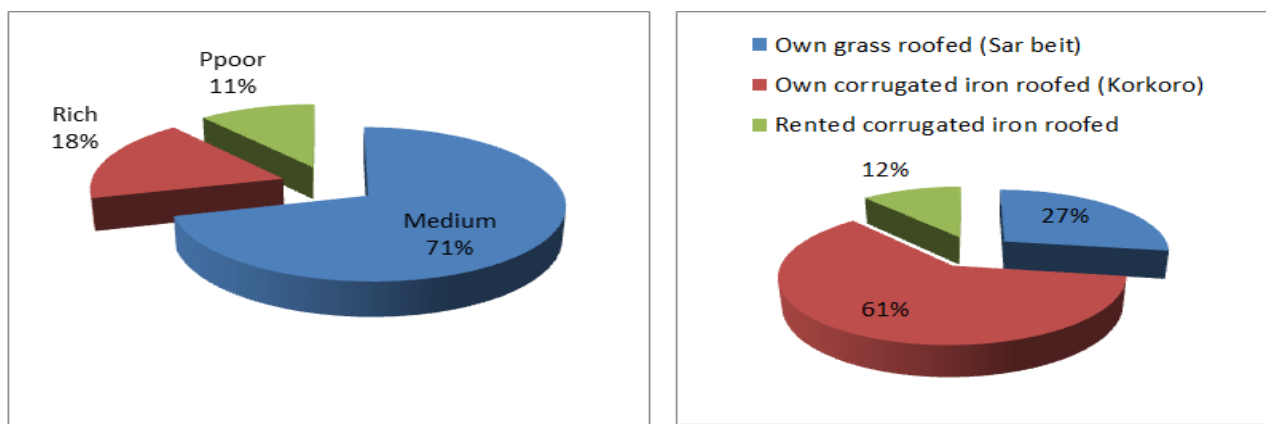
## 5.6 Social status of beneficiary farm households

Mixed (crop-livestock) farming is the dominant economic activity among the Raya Valley community, and livestock are an important source of livelihood. Moreover, livestock are used for traction power, and are a wealth indicator and a good investment to boost productivity. Livestock are also used for transport and as a source of manure to improve soil fertility to boost productivity. Our survey data showed that, on average, about 82.86% of sample households have a pair of oxen used for draft power, while approximately 17.14%

do not and plough their plots with oxen power that either rented or exchanged for their labour. At the same time, about 66.37% of the sample households own two or more dairy cows. Based on the positive impact of groundwater irrigation, groundwater irrigation beneficiaries on average own more livestock per household than non-beneficiary households in the studied area. As the household's income increases by means of cultivated cash crops, such as onions and tomatoes harvested by twice or more times per year, they invest in livestock such as oxen, cows, sheep, goats and camels. Owning more livestock and other household assets is a guarantee in times of external shocks, and is a wealth indicator in the community.

Owning more oxen obviously means that farmers can plough more agricultural land and further increase their crop production and farm income. In addition, higher income gained from irrigated production means that households are less likely to sell their livestock to fill their food gap and other requirements at household level. Based on the local community's standards of wealth-status classification, about 71% of sample households in the study area ranked as medium-income, 18% as rich, and 11% as poor. This implies that almost 90% of the beneficiary households have a good social status because of the groundwater irrigation delivered by the developmental state's pro-poor development programmes. The data from the studied area confirmed that about 91.59% of sample households had no problem fulfilling their food demand throughout the year, and about 8.41% only partially fulfilled their annual food requirement since they started using groundwater irrigation to boost their household income.

**Figure 5.4: Wealth status and housing condition of the sample households**



Furthermore, the sample beneficiary households confirmed that they had changed their houses from the more traditional grass-roofed type to a semi-modern, iron-roofed structure due to their increased levels of income through groundwater irrigation use (see Figure 5.4). The construction of new corrugated-iron-roofed houses in place of their traditional housing style is an indication of how the livelihood of these farm households had improved since they started using the groundwater irrigation infrastructure delivered by the developmental state. For instance, villages like Kara Adishawo and Wargba in the Raya Azebo *woreda* (i.e. villages that have used groundwater irrigation for many years) have changed from being local villages to rural towns. This proves that state intervention within a developmental state model achieved rural transformation through pro-poor development programmes.



## 5.7 Agricultural input utilisation of groundwater irrigation users

### 5.7.1 Access to agricultural extension service by farm households

Agriculture by nature requires better technologies and better agronomic farming practices to boost yields per hectare. All technologies and agronomic management require technical assistance to some degree in their diffusion (for instance, teaching farmers how to use and capitalise it). Accordingly, of all the SSA countries, Ethiopia is the one that has the greatest state involvement in the agricultural sector and has invested the most public funds to boost the productivity of the sector. This public investment has motivated farmers' activity directly or indirectly at the field level in four main ways:

First, farmers' cooperatives are responsible for supplying agricultural inputs (fertilisers, selected seeds, loans). Second, rural credits institutions mainly state owned provide rural loans to the farm households. Third, participation in collective work, known as 'communal work', 'development work' or 'social work' is compulsory to local development programmes to build rural infrastructure and improve the agricultural environment. Fourth, largely interlocked with the former, is the agricultural extension programme, probably the largest in sub-Saharan Africa (Davis et al., 2010:14).

Remarkably, the government has built the required basic rural infrastructure (including irrigation) needed to enable the farmers to meet the growing demand for food. The sample survey noted an increase in productivity of the farm households' using the opportunities provided by considerable public support at local level. This is one of the main aims of the agricultural extension programme delivered by the government. Access to extension and training services is expected to improve farmers' knowledge and skills for the efficient utilisation and management of resources. This reduces poor farmers' anxieties about technology adoption and they are quick to adopt these once they see evidence of the technology's ability to generate higher incomes and increased yields. For instance, evidence from Egypt showed that smallholder farmers in desert areas were persuaded to adopt drip irrigation once they witnessed the success of larger farmers (Mourshed, 1995). It is widely recognised that agricultural extension services play a considerable role in motivating and increasing farmers' awareness, adoption and efficient use of modern agricultural inputs (including HYV crops and vegetables) and that these are significant factors for improving productivity (Bhattarai et al., 2002). To improve irrigated agricultural productivity and production, an emphasis was placed on increasing the diffusion of modern agricultural inputs and increasing the awareness of the farm households to boost their productivity.

Public support programmes for the adoption of modern agricultural technologies in the rural sector commonly known as agricultural extension services. For this study, extension services are defined as a system and set of functions that may induce voluntary change in the rural agricultural sector. The system dominated by public and semi-public agents that transfer knowledge and agronomic and other managerial capacity and diffuse agricultural inputs. The public sector is the most important player in collaboration with the smallholder farmers in Ethiopia's agricultural development programme at the community level. The aim

of the extension service is to provide practical education to the farmers and foster the flow of information between farmers and their stakeholders.

Agricultural extension programmes can have varied effects depending on the technologies they promote and the level of adoption by farmers. In the studied area, as elsewhere in the region, the agricultural extension programme has promoted the increased use of external inputs (modern agricultural inputs) integrated with the indigenous farming systems/practices. The survey in the Raya Valley showed that during the 2005/06 production year, about 52% of the sample households had received government extension services and support (training and technical support) related to crop and horticultural production (Tesfay, 2008); this had increased to about 85% in the 2009/10 production year (Yirga, 2011). The current study found that by 2013/14, this coverage had reached about 92.04% of the sampled households, i.e. almost all farm households had access and their awareness of the benefits of these services had changed over time.

In villages where there is modern groundwater irrigation, in addition to the three extension agents deployed per village, one extra extension agent (irrigation expertise) was appointed to follow-up on the day-to-day activities of the beneficiaries. The main responsibilities of these agents are to provide technical support to the farm households to utilise modern agricultural inputs, to orient them to produce value-added crops and to diversify their farming systems to boost their productivity. As are presented in Table 5.3 some of the basic extension services are teaching farmers in practice at the FTCs, by extension agents at field level and farmer-to-farmer methods of teaching where model farmers teaching or sharing their good practices with others at their village or neighbourhood level. This extension of new knowledge is most effective when farmers are not only able to adopt it successfully, but go further and make incremental improvements to it. Hence, developing the awareness of the farm community to participate in agricultural extension service programmes and using different agricultural technologies would help to diversify their production system.

Although the government focuses on extension services, some beneficiary farm households revealed that there were certain limitations to the supports they received from some of the development agents. For instance, the survey indicated the following responses from farm households about the extension services they received: 60.18% were very helpful, 33.19% were moderately helpful, and 6.64% were not helpful. This indicates that there are some limitations to these extension workers including: (1) some extension workers have a lack of knowledge in key areas such as intensifying or diversifying farming systems. (2) They are not market oriented and they lack certain communication and soft skills such as how to organise farmers based on their interests. (3) Most of them have insufficient knowledge on how to practice the indigenous farming by integrating with the modern farming practices; rather have promoted the use of the external inputs. This shows that extension workers lack practical skills due to a lack of exposure to the indigenous farming experience, and their subject knowledge is narrow and geared towards technically oriented training. The extension work in the studied area has not been participatory enough and little consideration has been paid to the farmers' prior experiences and knowledge. The extension workers' focus on the diffusion of agricultural technologies instead of following up on the actual implementation of these technologies to augment

productivity. Furthermore, these extension workers have low job satisfaction and most of them seek alternative career opportunities or change their profession. Therefore, the government needs to address these and other limitations to capitalise on the benefits of the extension services programme.

**Table 5.3: Basic extension services provided to the beneficiary farm households**

| Services/advice                                | Obs. | %     |
|------------------------------------------------|------|-------|
| Fertiliser utilisation/application             | 203  | 89.82 |
| Farmland preparation                           | 11   | 4.87  |
| Irrigation resource utilisation and management | 150  | 66.37 |
| Postharvest handling and output marketing      | 18   | 7.97  |
| New seed varieties application/utilisation     | 131  | 57.97 |
| Credit and saving services                     | 45   | 19.91 |
| Pest and insect infestation management         | 109  | 48.23 |
| Improved animal production                     | 47   | 20.8  |

Source: Own sample survey (2014)

### **5.7.2 Modern agricultural-input utilisation and agronomic management**

The major reasons for low agricultural productivity in Ethiopia is related to weather fluctuations, particularly seasonal rainfall variability, and the lack of access to irrigation and modern farming practices, integrated with the indigenous farming systems. The development and expansion of irrigation and other rural infrastructure inspires the beneficiary farmers to invest in modern agricultural inputs and agro-economic management to maximise their productivity. Because the experiences from the developed countries demonstrated that the sustained use of improved agricultural technologies and modern agro-economic management increased agricultural production (FAO, 2002), the Ethiopian government focused on the supply and distribution of modern agricultural inputs to smallholder farmers. These tended to adopt simple technologies before moving on to more a complex ones and cheaper technologies before the expensive ones. Because smallholder farmers tend to be risk averse by nature, it is vital that they receive adequate information and good practical experience on how to apply modern farming practices (i.e. probably an integration of modern agricultural inputs with agro-ecological farming methods to generate higher yields on average for much longer).

The information can be diffused through different mechanisms such as extension agents, neighbourhood farmers, television, radio, and local newspapers, although this is not easy, particularly for uneducated and poor smallholder farmers in developing countries, like Ethiopia. Information is crucial for farmers to assess the suitability of the technology for their farming system and to understand the potential risks associated with its use. Tesfay (2008) reported that only 19% of groundwater irrigation users in the studied area used fertiliser, but all of them used improved seeds in the production year of 2005/06. However, this survey

indicated that about 90% of groundwater irrigation users used chemical fertilisers and all of them used improved seeds (such as onions, tomatoes, maize and teff) in their irrigated plots in the production year of 2013/14. In the studied area, a productivity augmenting package using modern agricultural inputs (in particular fertiliser) was mandatory for farmers in the groundwater irrigation project; i.e. the government stipulated that farmers had to use modern agricultural inputs (fertiliser) in order to access the groundwater irrigation to multiply their yield per hectare.

Therefore, households with access to a reliable irrigation infrastructure are more likely to use fertilisers than households without access to irrigation. This is why because access to reliable water for irrigation is taken as a precondition to use modern fertiliser by farm households. Furthermore, households use significantly higher amounts of fertiliser on irrigated plots than on rain-fed plots (Gebregziabher, 2008). The larger volumes of improved seeds used in irrigated agriculture in the studied area were tomato and onions, although sometimes farmers found it difficult to obtain a variety of quality vegetable seeds. The Woreda Agriculture Office and farmers' cooperative associations supply most of the vegetable seeds, but farmers in this study raised some basic problems regarding imbalance between supply and demand, the lower quality and higher price of the seeds, and delays in supply (not available on time). Thus, some of the farm households are forced to buy these inputs from private traders and are thereby exposed to high purchasing costs. Despite these limitations, the farmers' cooperative associations provide a wide variety of services, including input-supply management, grain marketing, post-harvest handling, processing into value-added products and the supply of consumer goods to members at prices that compete with local traders. Furthermore, some cooperatives are also involved in seed multiplication and distribution schemes, grain milling, the distribution of veterinary medicines, and training of members to develop a culture of saving. Therefore, cooperatives in Ethiopia have a niche in the production of high-value export crops, and they will consolidate the agro-processing practices at different levels.

However, from an agro-ecology perspective, the intensive application of chemical fertilisers is not sustainable in the long-run. There are plenty of evidences to suggest that chemical fertiliser-dependence will result in disaster in future, but there are alternatives to address this, i.e. agro-ecological farming, which is much closer to the indigenous knowledge systems. The intensive, long-term use of fertilisers results in soil pollution and degradation, and declining productivity, unless it properly managed and integrated with indigenous farming practices. Obviously, soil pollution will directly undermine agricultural yields, unless intervention approaches change the agro-ecological and agronomic management to restore the organic soil fertility. Agro-ecology is a principle paradigm that applied across a wide continuum of farming traditions to redefine the relationship between humans and nature (Swilling & Annecke, 2012).

Agro-ecological farming systems include mulching, green manuring, worm farming, contouring, tree planting, zero tillage, fallowing, diversification and the application of cattle manure (or compost) as organic fertiliser. Soil-fertility deficiencies can be reversed without using high external inputs, and yield increases are possible through soil restoration (by replacing external inputs with organically produced inputs) (Altieri

et al., 2011; Pretty et al., 2011). In the study area, the community uses many of these agronomic, farm-management practices but these are supplemented by the application of modern inputs (farmers should be advised to merge organic and inorganic inputs to increase yields). The government believed (based on conventional wisdom) that smallholder farmers are backward and unproductive so it devised a strategy to boost the use of modern agriculture inputs to achieve food security at a national level. However, this belief is contrary to research which shows that smallholder farmers are much more productive (due to efficient land use, biodiversity and other agricultural resources) than larger farms, that is, if total output is considered rather than yield per hectare from a single crop (Altieri, 2009).

The only agricultural system that will be able to confront future challenges (for instance, soil degradation and pollution) is one that exhibits high levels of diversity, productivity, and efficiency. Therefore, agro-ecological and indigenous agronomic management has emerged today as the most robust pathway to equitable and sustainable agricultural development (Altieri, 2009; Altieri et al., 2011). Smallholder agro-ecological management contributes substantially to improve food security and rural livelihoods, yet these contributions have not been adequately appreciated. For instance, practices such as water harvesting, soil-moisture retention, mixed cropping, crop diversification, agroforestry, soil-conservation, farmer-to-farmer sharing experiences, strengthening local research and problem-solving capacities have had a major impact on farming (Altieri, 2009). Moreover, indigenous agricultural intensification practices have the following advantages: they increase yields per hectare and cropping intensity (i.e. two or more crops per plot), and they change land use from low-value crops to those that receive higher market prices (Pretty et al., 2011). Accordingly, agro-ecological innovations can restore soil fertility and, thus, provide the basis for long-term food security and form the basis for more sustainable and longer-lasting development of agriculture (Swilling & Annecke, 2012). Given the enduring benefits of agro-ecological farming management and the government's conservational rural-development strategy, it would be advisable that to scale-up indigenous agronomic farming practices to minimise the impact of intensive chemical fertiliser use and to make the agricultural sector more ecologically friendly. The application of chemical inputs (which are not cost effective to smallholder farmers) is not the only solution to improving soil fertility – there are many other options, such as merging indigenous knowledge with modern practices, strengthening information systems at local level and a relational approach to interactions between humans, and between humans and ecology.

### ***5.7.3 Access to rural-employment opportunities***

The economies of most developing countries are dependent on human labour and oxen power for agricultural production, given the availability of agricultural land. Almost all rural populations in the region, and particularly in the Raya community, earn their living through manual labour. In comparison to mechanised agriculture, this requires the mobilisation of more labour for seasonal farm practices. Rural farm households, particularly the users of groundwater irrigation, employ large numbers of family and hired labour throughout the farming season. As Hussain & Hanjra (2004) noted, it is expected that irrigation will result in higher rates of, and more continuous, employment for rural farm workers due to the higher labour requirements for

irrigated horticultural activities in the dry season, such as land preparation, planting, weeding and harvesting. This finding is consistent with the assumption that access to reliable irrigation can generate additional employment opportunities for the rural communities.

The dry season was traditionally a slack/idle period for most of the farmers in the studied area. However, following the introduction of groundwater irrigation, dry season cropping was introduced. This requires considerable labour for land preparation, planting, weeding, hoeing, watering, and harvesting of the irrigated crops. The survey confirmed that the farm labour requirements increased considerably after groundwater irrigation was introduced in the Raya Valley and this provided employment opportunities for a considerable number of rural households. Furthermore, the household members are busy throughout the production seasons. This proves that irrigation provision is a pro-poor strategy, and that the rural-development programme has a positive spill-over effect by creating many employment opportunities, which have a great impact on resource distribution, food security and poverty alleviation at both the household and community levels.

The study revealed that about 80% of the sample households created seasonal employment opportunities for rural labourers in their community, in addition to using family labour in both the first and second seasons of 2013/14 production year. Irrigation by nature is an intensive practice and demands a larger labour force throughout the production process, especially for cash-crop production. Thus, the average hired worker per household was 40 persons in the first season and 41 persons in the second in the 2013/14 production period; this ranges from zero to 236 persons and from zero to 264 persons per household in each production season, respectively, subject to the households' plot size and the type of crops cultivated. In addition, the farm households also used family labour in the irrigated farm production activities, i.e. there were no idle family labourers during the production season.

The results of this survey are consistent with the findings of Lipton et al. (2003) and Narayanamoorthy (2007) who found a direct relationship between access to irrigation and the ability to generate additional farm and non-farm employment opportunities in Asia. Owing to a higher cropping intensity, several crops can be grown on the same irrigated land over the course of the production process, in contrast to only one crop under rain-fed production, allowing for more land- and labour-intensive production. Thus, irrigation generates a greater demand for labour, which benefits land-poor farm households (Hussain & Hanjra, 2004). Even though there are variations from farmer to farmer, depending on the type of crop and cultivated plot size, the demand for labour is significant in the studied area. Therefore, this study concluded that the provision of groundwater irrigation through substantial public investment has provided the opportunity for seasonal employment in the rural community, and serves as a tool of resource sharing/income distribution. Furthermore, all age groups in the family are busy with different activities during the production season; for instance, cash-crop production (onions and tomatoes) generated an opportunity to use all available family labour, and every member of the household is busy throughout the production season.



#### 5.7.4 Access to credit and training

Smallholder farmers have highly variable flows of income and expenditure due to the seasonal nature of agricultural practices, so access to credit is crucial for them to manage their production and consumption processes. Credit is required to buy agricultural inputs/farm tools and possibly invest in infrastructure that could boost the productivity of the household. As irrigated agriculture is input intensive by nature (both labour and other inputs), this may aggravate the liquidity constraints of poor farm households and limit their access to the main factors of production. Therefore, the contribution of rural credit institutions is important in providing credit to create financial capital alternatives to the farm households to boost their investment in irrigated agricultural activities and increase their productivity or enable them to diversify their economic activities. Credit is used predominantly for the purchase of livestock, farm inputs such as fertiliser, seeds and pesticides, and, in some cases, for the construction of a house.

The Debit Credit and Saving Institution (DECSI) is one of the credit institutions in the regional state of Tigray that provides credit to address the financial constraints of the farm households, to enable them to buy farm inputs and equipment/tools. Farmers' cooperative associations also provide institutional credit to their members, both in cash and in kind, (i.e. agricultural inputs and other farm equipment). In addition to these formal credit institutions, in the study area there are a few informal credit-source arrangements at the local level. These include relatives, friends, neighbours, local moneylenders, local community insurance (*iddir*), and rotating savings and credit associations (*iqub*). However, the survey indicated that only 26.55% of the sample households had borrowed money from these different credit sources during 2013/14. Some of the reasons given by farm household for not taking credit include:

- The high interest rates of the lending institutions (for instance, for DECSI's interest rate is about 18%, which is high);
- Religious restrictions, especially for Muslim farm households, who are prohibited from taking credit with interest;
- Borrowers are collectively liable for loans, as collateral is not required, and many of the respondents said that they did not want to take collective responsibility (i.e. they disliked group lending and collective liability);
- Many of the respondents said that they did not have financial constraints for the purchase of agricultural inputs since they started using groundwater irrigation technology.

Training is also important for farm households to understand the role and benefit of agricultural inputs to improve their productivity and production. The study revealed that about 66.81% of farm households had received training at least once since they had started to practise groundwater irrigation. The main training included agricultural extension (such as crop and vegetable production, fertiliser use, compost preparation and modern groundwater-irrigation utilisation) and natural-resource management (such as watershed management like terracing and agro-forestry). The Agricultural and Rural Development Office and the

Farmers' Cooperative Associations Agency delivered much of the trainings, but some of it was also delivered by local and international NGOs. Thus, in the study area there was training on seedbed preparation, seedling production, optimum transplanting times, the stages of seedling growth, line planting and spacing, crop rotation, watering frequency, disease and pest control, harvesting stages and storage techniques. Further, training in line-sowing techniques, using new agricultural technologies, and how to grow different high-valued crops, all contribute to boosting smallholder productivity and farm income.

In general, smallholder farmers require the necessary knowledge to use modern agricultural technologies such as machinery, new seed varieties, fertilisers, pesticides, energy, storage facilities, and irrigation to maximise their productivity. Information and learning can encompass training, external sources (e.g. extension agents, neighbourhood farmers, television, radio and local newspapers), experimentation and sharing good practices with neighbourhood farmers. Accessing these resources requires well-functioning factor markets, which can be a constraint in the rural areas because input demand is seasonal and small-scale. Collective purchasing of inputs, for instance, through farmers' cooperative associations or the WUAs, could help to address these constraints by creating economies of scale and reducing the transaction costs to maximise the benefits of groundwater irrigation infrastructure, and rural development in general.

## **5.8 Crop diversification/intensification using groundwater irrigation**

Access to reliable irrigation is a powerful factor, which provides a greater opportunity for cropping intensity, and multiple cropping or crop diversification (Shah et al., 2003). Before the introduction of groundwater irrigation infrastructure in the studied area, most farm households produced staple crops such as teff, maize, sorghum and barley, usually for household consumption. Vegetables and fruit cultivation was limited to those households that had access to irrigation from river diversion and micro-dams such as ponds. However, more recently, after the government introduced groundwater irrigation schemes, beneficiary farmers started to produce high value (market-oriented) horticultural crops such as tomatoes, onions and peppers.

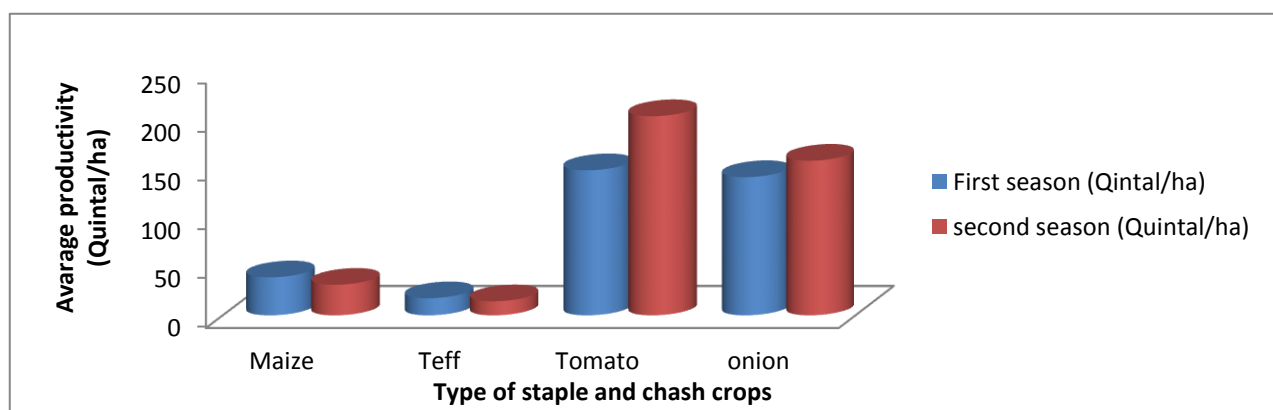
The usual crops (cash and staple crops) produced by the users of groundwater irrigation are tomatoes, onions, peppers, maize and teff, and others. The surveyed sample households revealed that most of the farmers produced more than one crop per production season. Vegetables appeared to provide the most intensive production and most of the farmers are able to produce twice (or more often) per year. The most commonly produced vegetables, in terms of the number of producers, were onions and tomatoes. As Table 5.4 indicates, onions were grown by 76.55% of the sampled households, followed by tomatoes at 33.63%, using groundwater irrigation in the 2013/14 production period. Furthermore, about 70.8% and 54.42% of the beneficiary sampled farm households also produced maize and teff, respectively (the two main staple crops in the studied area), in the same production period.

**Table 5.4: Type of crops/vegetables produced and average output (Quintal/ha) in 2013/14**

| Crop/vegetable | First season (1) |                                    |           | Second season (2) |                      |           | Total (1+2) |       |
|----------------|------------------|------------------------------------|-----------|-------------------|----------------------|-----------|-------------|-------|
|                | Obs.             | Mean<br>(in quintal) <sup>54</sup> | Std. Dev. | Obs.              | Mean<br>(in quintal) | Std. Dev. | Obs.        | %     |
| Maize          | 89               | 38.94                              | 32.38     | 71                | 31.36                | 16.63     | 160         | 70.8  |
| Teff           | 55               | 17.57                              | 10.51     | 68                | 14.41                | 10.16     | 123         | 54.42 |
| Barley         | 12               | 22                                 | 15.59     | 9                 | 13.78                | 11.16     | 21          | 9.29  |
| Peppers        | 6                | 73.33                              | 46.76     | 2                 | 34                   | 19.8      | 8           | 3.54  |
| Tomato         | 44               | 148.64                             | 132.17    | 32                | 203.84               | 153.1     | 76          | 33.63 |
| Onions         | 81               | 141.66                             | 80.40     | 91                | 158.39               | 90.1      | 172         | 76.55 |
| Cabbage        | 3                | 191.1                              | 186.83    | 5                 | 269.2                | 252.16    | 8           | 3.54  |
| Others         | 15               | 34.15                              | 41.04     | 15                | 24.93                | 27.45     | 30          | 13.27 |

Source: Own sample survey (2014)

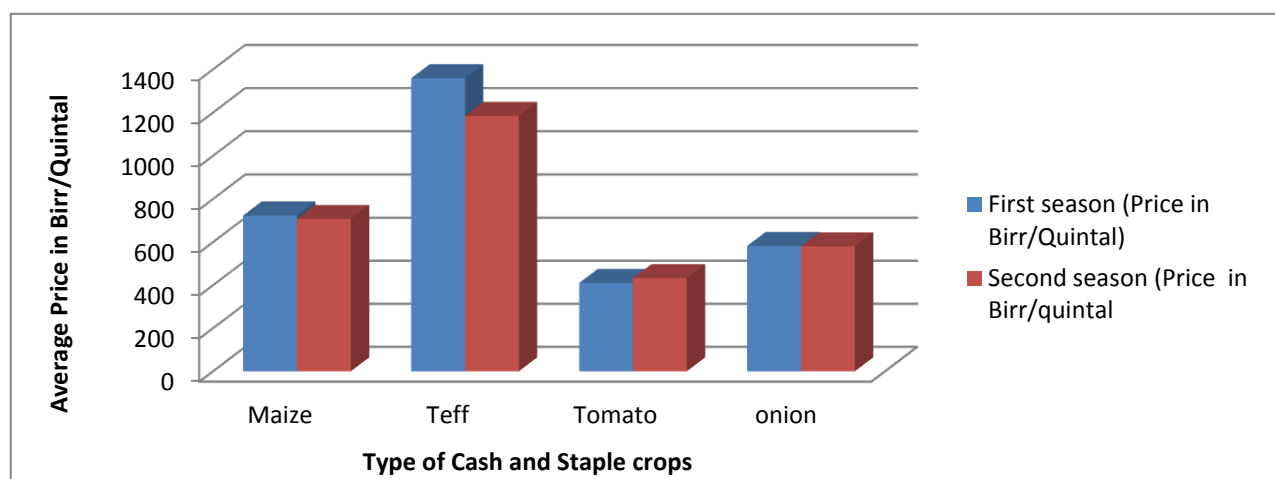
As Table 5.4 indicates, there have been significant differences in productivity per hectare between cash and staple crops using the same agricultural technology, such as groundwater irrigation and other inputs. The productivity per hectare for cash crops (vegetables) is much higher than for staple crops. The average onion yield per hectare was estimated to be about 141.66quintals in the first season and 158.39quintals in the second season of 2013/14. The average tomato yield per hectare was about 148.64quintals in the first season and 203.84quintals in the second of the same production period. On the other hand, the average maize yield per hectare was about 38.94quintals in the first season and 31.36quintals in the second season of 2013/14. The average teff yield per hectare was estimated to be about 17.56quintals in the first season and 14.41quintals in the second of the same production period. Figure 5.5 shows the mean productivity differences between staple and cash crops.

**Figure 5.5: Mean productivity per hectare for two staple and cash crops**

<sup>54</sup> One quintal is equal to 100kg or ten quintals are equal one tone.

The question is, if the productivity of cash crops is better than the staple crops, why do beneficiary households not cover all their irrigated plots with cash crops every production season. Some of the justifications given by the beneficiary farm households are First, if they were to cultivate their whole plot with onions or tomatoes, they would be exposed to price volatility, or, in short, they would face marketing problems. Second, they need these staple crops for two main purposes: for household consumption, and to use their residues (straw or fodder) for their livestock, which is likely to lead to an increase in the number of livestock kept by the households. Third, practising crop rotation or inter-cropping helps them to sustain/maintain the soil fertility of their plots. This is part of the rationale for cultivating staple crops. Further, even if the yield per hectare for tomatoes was higher than for onions, the market value (average price per quintal) for onions was slightly higher than for tomatoes in both production seasons of 2013/14 (see Table 5.6). However, although the productivity of staple crops was much lower than cash crops, their market value (average price per quintal) was higher than for cash crops.

**Figure 5.6: Comparison of market values of cash and staple crops produced by farm HHs**

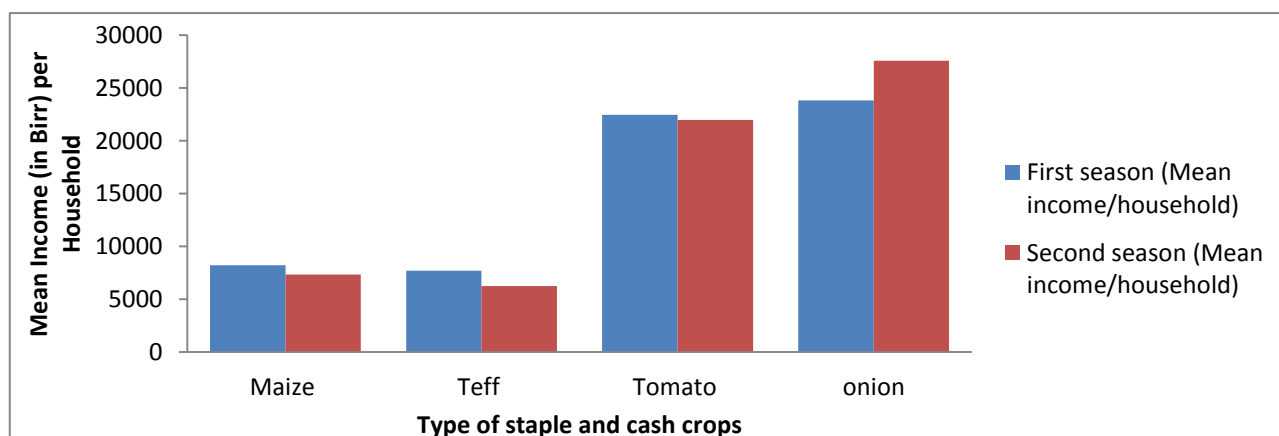


Obviously, the yield per hectare for tomatoes and onions was much higher than that of the staple crops (maize and teff) using the same inputs. In effect, the average income per household for those who produced cash crops in each production season was about three times as much as for those who produced staple crops (see Table 5.5 & Table 5.7). Thus, in terms of output and total farm income, producing cash crops is preferred to producing staple crops, even though the price quintal for cash crops is much lower than for staple crops. Access to reliable groundwater irrigation contributes positively to patterns of diversification, intensification and increasing farm households' productivity and income.

**Table 5.5: Value for output of crops/vegetables (in ETB) in 2013/14**

| Crop/vegetable | First season  |           | Second season |           |
|----------------|---------------|-----------|---------------|-----------|
|                | Mean (in ETB) | Std. Dev. | Mean (in ETB) | Std. Dev. |
| Maize          | 8208.61       | 6389.86   | 7339.58       | 5795.31   |
| Teff           | 7719.65       | 6428.64   | 6251.28       | 5111.72   |
| Barley         | 4838          | 2911.76   | 2466.67       | 1879.49   |
| Pepper         | 6750          | 4957.32   | 9100          | 5798.28   |
| Tomatoes       | 22473.18      | 28595.9   | 21971.72      | 28512.88  |
| Onions         | 22183.23      | 13915.88  | 27587.7       | 20293.4   |
| Cabbage        | 14666.67      | 8082.91   | 26080         | 7623.12   |
| Others         | 6561.87       | 5561.97   | 5826.67       | 5694.92   |

Source: Own sample survey (2014)

**Figure 5.7: Comparison of mean income per household (in ETB) from staple and cash crops**

By boosting the productivity and production of the beneficiary farm households, the average farm income per household has increased. Therefore, groundwater irrigation infrastructure has contributed directly to the beneficiary farm households by increasing their income. Irrigation has also contributed indirectly to non-beneficiaries by creating seasonal employment opportunities and reducing the prices of staple and cash crops by increasing the supply to local and regional markets. The economic and social benefits of groundwater irrigation infrastructure include:

- Most of the beneficiaries achieved food self-sufficiency and food security at the household level;
- Their family labour force was fully employed in farming practices and they hired additional labour;
- The income level of the household was improved through using additional agricultural inputs and improving their farming practices;
- It increased the production of marketable agricultural produce or cash crops; i.e. producing surplus produce and boosting the supply to local and regional markets;

- It improved their level of savings or physical asset holding and their approach to farming practices (i.e. adopting/practising intensive farming);
- It improved the level of consumption within the household by increasing their income levels;
- It changed their living conditions and their ability to send their children to school, including private colleges, without any economic constraints;
- It encouraged participation in many rural-development programmes and many of them became model farmers;
- It developed better agronomic management practices with the support of extension services;
- They could build new and better houses, and purchase additional livestock and other household assets;
- They received a better social status in the community due to their improved wealth status.

To summarise, irrigation can increase the intensity and diversification of crop production by enabling the cultivation of multiple crops per production season. It increases input intensity and moisture availability, which, in turn, improves productivity, and modern farming practices at the community level. Irrigation is the most important agricultural component for reliable production. For this reason, the Ethiopian government invested large sums of public finance in the provision of irrigation infrastructure to improve the livelihood of the smallholder farmers and contribute to overall economic growth.

## **5.9 Accessibility of institutions and community participation**

Households with greater social capital and with more relationships through their involvement in local associations may have better access to information or inputs and, thus, may be more productive. Involvement in agriculture-oriented associations, such as the farmers' cooperative associations and agricultural cadres, may increase the farmers' awareness of modern agronomic and farm-management practices, and this, in turn, increases their productivity and production (Pender & Gebremedhin, 2007). The term 'social capital' is used to describe the importance of social relationships in social and economic life; these are based on the trust and solidarity that develops between people who work in groups/networks to achieve collective and mutually beneficial outcomes. Social capital lowers the transaction costs of working together, it facilitates cooperation, and people have the confidence to invest in collective activities. Therefore, it is an important prerequisite for the adoption of sustainable behaviours and technologies in the larger community (Pretty et al., 2011). Hence, social capital may increase the farmers' ability to earn higher returns from marketing their products and improve their access to inputs (for instance, membership of marketing cooperatives) for modern farming practices (Pender & Gebremedhin, 2007).

Given scarce or inadequate information and fragmented markets (both factor and output markets), social networks facilitate the exchange of information, and enable farmers to access agricultural inputs and address their credit constraints. Being a member of different associations reduces transaction costs and increases a farmer's bargaining power, helping them to earn higher returns when marketing their produce at a proper



market (Wollnia et al., 2010). Although it takes time to build social capital, once established it appears to be an essential condition for the rapid flow of information, strengthening cooperation and mutual benefit, acting collectively and fostering trust in the community. Therefore, the state should support the building of social capital to strengthen its cohesion with the masses, and use this as its broad-based, state–society coalition to increase the productivity of the agricultural sector and to accelerate the overall rural transformation.

To increase the productivity of farm households, it is vital that they have access to agricultural output and input markets,<sup>55</sup> reliable information and support organisations, including credit institutions. Membership of farmer-based organisations such as cooperatives, WUAs and marketing organisations, contributes positively to the farmers' investment decisions based on reliable information. For instance, farmers' cooperative associations can collect information about production technologies and consumer preferences, and distribute this to their members through extension visits or demonstration sessions. Therefore, membership of a cooperative is important for farm households to benefit from the services they provide. They elevate the social and economic circumstances of their members and create bonds of social solidarity, and they become an important instrument in bottom-up sustainable rural development.

Thus, the survey of sample households in the Raya Valley confirmed that almost all adults are members of different local institutions (both formal and informal associations) in their community (see Table 5.6). Through their membership of formal and local institutions, the farmers augment their social and economic benefits by strengthening their interactions and linkages within the community. For instance, male adult members of households' could be members of either farmers' or youth associations based on their age; female adults could be members of women's or youth associations depending on their age; while young, female adults could become member of both women's and youth associations because dual membership is also possible for them. Other formal and local institutions do not have age or gender specifications and any adult can volunteer to become a member of any of them. These institutions allow the community to exchange political, economic, and social aspects within the community at the local level, or across the larger community. Farmers are empowered by these formal and informal groups (social capital) based on a common interest.

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<sup>55</sup> Markets are critical in irrigation development and, particularly, in output markets. Output markets have been either the driving force behind several irrigation developments or the reason for their collapse. Produce markets that are predictable and reliable, to the extent that prices paid make irrigation economically viable without any distortions, are a prerequisite for successful irrigation development (Aw & Diemer, 2005).

**Table 5.6: Household's membership or networks at the community level**

| Community association/organisation                   | Households' response |       |     |       | Mean membership<br>(in years) |
|------------------------------------------------------|----------------------|-------|-----|-------|-------------------------------|
|                                                      | Yes                  | %     | No  | %     |                               |
| Farmer's association                                 | 122                  | 53.98 | 104 | 46.02 | 9.13                          |
| Women's association                                  | 167                  | 73.89 | 59  | 26.11 | 8.2                           |
| Youth association                                    | 118                  | 52.21 | 108 | 47.79 | 5.93                          |
| Farmers' cooperative association                     | 131                  | 57.96 | 95  | 42.04 | 6.23                          |
| <i>Iddir</i> /funeral & wedding services association | 187                  | 82.74 | 39  | 17.26 | 10.54                         |
| <i>Iqub</i> /rotating savings group                  | 78                   | 34.51 | 148 | 65.49 | 5.37                          |
| Feast days ( <i>Mahber</i> ) association             | 113                  | 50    | 113 | 50    | 10.53                         |
| Exchange/sharing draft power                         | 77                   | 34.07 | 149 | 65.93 | 10.33                         |
| Theft prevention group                               | 124                  | 54.87 | 102 | 45.13 | 6.7                           |
| Community-risk prevention pool                       | 99                   | 43.81 | 127 | 56.19 | 3.72                          |

Source: Own sample survey (2014)

In addition to the formal institutions, there are different customary institutions at the community level to strengthen the interconnection and relationships of the farming communities. For instance, these include funeral groups or community insurance (*iddir*), labour-sharing groups (*lifinti*), sharecropping land arrangements (*megazo*), and savings and loan-type groups like rotating savings (*iqub*). These played a pivotal role in the community, enabling them to share their social and economic problems, to strengthen their interaction and to share information about their day-to-day activities.

Moreover, in addition to the formal justice institutions at different levels, depicted in Table 5.7, there are different traditional conflict-resolution mechanisms that are closely bound to the socio-political and economic realities of the lifestyles of the communities. These include the customary courts (called *gereb*), which rely on the goodwill of the community to adhere to their rulings. The process of conflict resolution by the customary courts has appreciated and supported by the state, because these courts reduce the state's institutional burden and are easily accessible to the community. These indigenous institutions enable the community to help themselves, and the state shows a strong commitment to achieve development and minimise conflicts by working closely with these institutions. All these customary institutions have their own rules and regulations (unwritten) developed through the consent of the members of the respective institutions. A combination of customary and formal institutions is also critical in the management of the natural resources that facilitate and improve the socio-economic development of the community. Therefore, indigenous institutions, like social capital, relational dynamics/networks, village obligations, and all other things at community level, are essential to ensure the success of the rural economy and rural transformation.

These formal and informal associations (institutions) are important to mobilise community participation in local activities and development programmes, and they serve as a point of interaction (bridge) between the state and society in the development process. The community has actively participated in local development programmes such as:

- Participation in building small-scale irrigation infrastructure like water-diversion structures for spate irrigation (during the high rainy season for their rain-fed farming) and other small-scale irrigation practices;
- Participation in building and maintaining the rural road programmes such as the URRAP (Universal Rural Road Access Programme) which started in 2010/11 at village level;
- Compost preparation (composting) to boost soil fertility, productivity and production;
- Participation in soil and water conservation campaigns (in the watershed-management programme) to protect their environment and natural resources;
- Digging shallow wells (Ella or kurie in Amharic) for both livestock and micro-irrigation purposes;
- Building and fencing of local institutions such as schools, health centres and posts, water institutions, FTCs and other local institutions.

The community voluntarily (freely) participated in some of these community development works/activities, but in other instances they were partly remunerated (as off-farm activities). Therefore, this is important as a source of income diversification, food security, and poverty alleviation. For instance, the PSNP was one of the rural development programmes in which the community participated for conditional remuneration. Community participation in collective work known as ‘communal work’ or ‘development work’ is indispensable to provide local infrastructure and improve the agricultural environment by engaging in soil and water conservation, and diversion for small-scale irrigation purposes.

As Table 5.7 indicates, the communities have access to the following basic formal institutions to obtain the necessary services. These are: village administration centres, health posts, elementary schools, grain mills, FTCs, village farmers’ cooperative centres, veterinary centres and social courts (*Mahberawi firdbiet* in Amharic), which can be accessed on average within a 3–5km radius, and ranges from 0.5–15km. In addition, the community has access to *woreda* markets, health centres, a district hospital, secondary schools, a *woreda* court (*woreda firdbiet* in Amharic), and other *woreda* government institutions on average within a 6–15km radius, ranging from 2–30km. Regarding the accessibility to rural roads, the survey revealed that on average all sampled households have access to all-weather roads within half-an-hour’s walking distance. This indicated that there are good feeder roads to enable access to the *woreda* centres or small towns. A good rural road infrastructure is crucial for the rural population to secure access to greater resources, employment, and opportunities in the way of better markets, faster access to basic social services like education, health care and extension services, and lighter transport burdens.

**Table 5.7: Accessibility of formal institutions by the Raya Valley community**

| Institutions                         | Distance (in km) |       |           | Time take (in minutes) |           |
|--------------------------------------|------------------|-------|-----------|------------------------|-----------|
|                                      | Obs.             | Mean  | Std. Dev. | Mean                   | Std. Dev. |
| Nearest health centre                | 223              | 3.95  | 4.36      | 37.77                  | 39        |
| Nearest health post                  | 216              | 2.78  | 2.77      | 25.2                   | 18.65     |
| Nearest elementary school            | 222              | 1.64  | 1.46      | 13.61                  | 10.14     |
| Nearest grain mill ( <i>Wofcho</i> ) | 222              | 1.52  | 1.47      | 13.75                  | 13.38     |
| Local social courts                  | 213              | 1.93  | 2.1       | 17.65                  | 19.14     |
| Farmers training centres             | 222              | 1.68  | 1.42      | 15.95                  | 14        |
| Village cooperative centre           | 220              | 1.93  | 2.24      | 16                     | 15        |
| Nearest veterinary centre            | 223              | 3.28  | 3.69      | 31.84                  | 37.23     |
| Nearest local market                 | 160              | 5.92  | 6.51      | 59.88                  | 67.39     |
| Nearest secondary school             | 225              | 6.71  | 5.59      | 65.44                  | 54.57     |
| Woreda market                        | 225              | 8.31  | 7.71      | 78.79                  | 46.47     |
| Zonal/district hospital              | 224              | 15.93 | 11.39     | 157.98                 | 113.84    |
| Woreda court                         | 202              | 8.65  | 9.12      | 81.22                  | 46.37     |

Source: Own sample survey (2014)

Access to accurate markets can influence the farmers' decision-making and investment in various ways, like availability or accessibility of input and output markets, access to information and support institutions, and access to credit institutions and extension services (Pender & Gebremedhin, 2007; Wollnia et al., 2010). Yet both input and output markets are highly fragmented, where informal brokers set market prices, usually not in the interests of farmers. This problem is extremely difficult during peak harvest seasons when farmers cultivate high-value but perishable crops. In the study area, the beneficiary farmers' goal was to produce more produce by using irrigated plot, but their final income is critically dependent on the market for their produce; i.e. marketing is a critical for these producers. The low prices they receive for their produce reduces their motivation to make further investments in groundwater irrigation practices. Thus, some of the farmers either rent out or sharecrop their irrigated plots, rather than cultivating themselves, to minimise the expected and actual risks.

The evidence from the survey indicated that about 68.58% of the sample households in the Raya Valley complained about market problems and a lack of fair prices for their output, particularly for cash crops (onions and tomatoes). Their main constraints revolved around the lack of alternative market outlets or information, and/or the lack of easy access to nearby efficient markets. For instance, the price volatility during the harvesting season remains the main problem in the studied area. About 66.37% of the respondents confirmed that price volatility is their main constraint, followed by the lack of market information 28.31%, and the great distance to the regional market and high transport costs 12.83%. The main factor that causes price volatility for cash crops in the studied area is the production of excessive amounts of the same/identical

product in a production season. As a solution, the farmers' cooperative associations, in collaboration with the WUAs, have provided proper storage/warehousing as a means of stabilising the income of the beneficiary farm households, and in the agricultural sector in general. In addition, the government and other stakeholders need to work with the farmers to take the necessary actions to bring alternative buyers into the market (during peak harvest seasons) to protect the beneficiary farm households from loss of income.

In general, the farm households and their members have access to some basic institutions, which are important to facilitate their political, economic, cultural, and social development. To obtain the necessary services from these institutions in a sustainable manner, the farm households have adopted them as their own. The farm households in the studied area interact quite often with both state and non-state institutions regarding their agricultural activities and other social issues. For instance, Table 5.8 indicates how often the farm households visited public and other institutions, including private input suppliers and neighbours in the field to get the needed services. This interaction is relevant to the farm households to develop their awareness, to share their experiences, to access modern inputs, to address the constraints related to their farming practices, and other social constraints in an integrated manner.

**Table 5.8: The frequency of farm households' visits to local institutions**

| <b>Institutions</b>                   | <b>Obs.</b> | <b>Always %</b> | <b>Sometimes %</b> | <b>Once in a season %</b> |
|---------------------------------------|-------------|-----------------|--------------------|---------------------------|
| Tabia administration                  | 216         | 53.24           | 34.26              | 12.50                     |
| Woreda Water Resource Office          | 160         | 3.13            | 65                 | 31.88                     |
| Woreda Agricultural Office            | 184         | 5.43            | 63.59              | 30.98                     |
| Farmers' cooperatives association     | 203         | 51.23           | 40.89              | 7.88                      |
| Farmers training centres              | 201         | 55.72           | 39.30              | 4.98                      |
| Dedebit Credit Institution and Saving | 107         | 23.36           | 31.78              | 44.86                     |
| Agricultural research centres         | 40          | 32.50           | NA                 | 67.50                     |
| NGOs in the area                      | 26          | 3.85            | 57.69              | 38.46                     |
| Private input suppliers               | 111         | 43.24           | 36.94              | 19.82                     |
| Neighbours/Friends                    | 216         | 93.52           | 5.09               | 1.39                      |

Source: Own sample survey (2014)

### **5.10 The WUAs and management issues of the groundwater irrigation schemes**

Irrigation can assure crop production, allow crop diversification and intercropping, but it requires proper management to meet the objectives set. There are different management styles associated with government-led irrigation schemes, for instance, the agency/department managed schemes, farmer-managed or community-managed schemes, and public–beneficiary managed schemes. Public institutions, with subsidies from the government, manage most large or medium-scale government-led irrigation schemes while mostly the communities through the WUAs manage small-scale systems. Because Ethiopia is a federal state,

government organisations are responsible for groundwater development (for both irrigation and drinking water supplies) and this differs among the regional states. However, in all regional states, there is an equivalent of a Bureau of Water Resources in charge of the rural water supply, irrigation infrastructure development and water-resource management. In almost all the regional states, responsibility for irrigation management and utilisation lies in an equivalent of a Bureau of Agriculture and Rural Development or Bureau of Agriculture. Local authorities below the level of the regional states, particularly the districts and the villages (*tabias*), are increasingly responsible for providing public services, and managing them.

The Raya Valley survey revealed that all the groundwater irrigation schemes were managed by the beneficiary farm households, through their respective WUAs (or water-user cooperative associations), accompanied by traditional (indigenous) irrigation-management systems. Following state investment in irrigation infrastructure process done, the irrigated command area was distributed to smallholder farmers to: boost production (produce at least twice or more times per year), increase productivity (produce two or more crops per season) based on plot size and enhanced and promoted inclusive, democratic, and equitable governance over the irrigation schemes through the WUAs. This means the management practices were transferred to the users through the WUAs to which those who have access to irrigation become members. The WUAs are local institutions formed by the beneficiary farmers; these are responsible for the overall management of the groundwater irrigation schemes and they follow principles of equity and efficiency in the allocation and distribution of water resources. The respondents explained that after the installation of the necessary groundwater irrigation infrastructure, all beneficiaries were given training on how to use the new irrigation technologies, how to operate them and how to access technical supports from responsible institutions. The beneficiaries of the irrigation in the Raya Valley practised more of an enterprise-oriented model. Each of the wells was operated under a WUA, which have, on average, eleven committee members put in place to manage the overall groundwater irrigation system. This indicates that an effort has been made to involve farmers progressively in the various aspects of small-scale irrigation management related to water distribution, operation, and maintenance to improve the performance of irrigated agriculture.

In the survey, about 90% of the respondents confirmed that their irrigation scheme was managed by a WUA, and about 95% of the farm households had participated in the general meeting of the association to elect their committee/leaders. Each of the groundwater irrigation schemes' user associations has their own rules and regulations (by-laws)<sup>56</sup>. Based on their by-laws, the respective WUAs have a general assembly where all irrigation beneficiaries assemble to discuss the high-level issues, elect committee members, and decide on the fee for irrigation power-use per plot, etc. The executive committees have the following major responsibilities: they take care of the physical infrastructure of the irrigation scheme, monitoring pump operations and facilitating maintenance when necessary, supervising the normal water distribution, and

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<sup>56</sup> The by-laws are the primary source of internal rules and regulations (the constitutional rules of each WUA) that regulate the WUA's activities. The by-laws should not be amended frequently in order to promote stability, and should only be amended if strictly necessary.



executing other related responsibilities. The WUAs operate in accordance with their by-laws and have regular consultations with developmental agents, the Woreda Agricultural Office, the Water Resource Office, and the Farmers' Cooperative Agency to discuss the condition of the scheme. Regardless of their capacity limitations, the information confirmed that many of the WUAs from the studied area are relatively capable and efficient to manage their irrigation schemes (see Table 5.9). The leadership capacity of these WUAs was derived from continuous training and consultation with the Agriculture Office, Water Resource Office and Cooperative Agency and the extension workers at village level, as well as sharing their good experiences among themselves.

**Table 5.9: Performance evaluation of the WUA/cooperative committee by the beneficiaries**

| Indicators/activities                  | Evaluation rank to the role of the WUAs committee |       |        |       |           |       |
|----------------------------------------|---------------------------------------------------|-------|--------|-------|-----------|-------|
|                                        | Poor                                              |       | Good   |       | Very good |       |
|                                        | (Obs.)                                            | %     | (Obs.) | %     | (Obs.)    | %     |
| Leadership fairness & equity           | 15                                                | 6.64  | 156    | 69.03 | 55        | 24.34 |
| Resource mobilisation & distribution   | 21                                                | 9.29  | 138    | 61.06 | 67        | 29.65 |
| Infrastructure maintenance & operation | 34                                                | 15.04 | 145    | 64.16 | 47        | 20.80 |
| Control irrigation equipment           | 30                                                | 13.27 | 149    | 65.93 | 47        | 20.80 |
| Accountability & responsibility        | 20                                                | 8.85  | 153    | 67.70 | 53        | 23.45 |

Source: Own sample survey (2014)

The WUAs are public interest, local institutions formed by the beneficiary farmers and have legal status; they were established to assure the sustainability and fair distribution of water resources. One of the most common reasons for governments to turn the management of irrigation schemes to users is the lack of public funds to cover the operation and maintenance costs of the scheme. Some argue that governments cannot subsidise large irrigation schemes and then bear the operational and maintenance costs indefinitely. Instead, farmers should cover these costs when the irrigation projects mature and the farmers reach a stable level of income (Aw & Diemer, 2005). Therefore, in line with this argument, in Ethiopia, and particularly in the studied area, the main justification for transferring the irrigation infrastructure to users is to minimise government expenditure and to institutionalise irrigation-cost recovery (such as operations and maintenance) by the beneficiary farm households. It was generally expected that the transfer of irrigation management to the beneficiary farm households would contribute to improved performance and increase the sustainability of the irrigation systems. Some of the characteristics and institutional frameworks of the WUAs in the studied area, and elsewhere, are as follows:

#### **Characteristics of WUAs:**

- WUAs are farmers' organisations and they have a broader public interest mandate;
- Membership is compulsory and linked to the land plot within the service area; based on the land-use right, every person who uses land located within the service area is a member of the association;

- Compulsory membership of a WUA is essential to ensure the sustainability of the irrigation resource;
- The WUAs operate on a non-commercial basis, but they provide services to their members and governance of the irrigation schemes;
- They very often use public-infrastructure irrigation schemes, i.e. infrastructure built with public money through a pro-rural development programme;
- The WUAs are self-managed organisations governed by their members, but due to public interest the nature of their tasks are subject to some form of supervision by government institutions at the *woreda* level;
- The tasks of the WUAs are limited to the management, operations and maintenance of an irrigation system and watershed management for the sustainability of the irrigation resources;
- The state has the right (and the duty) to ensure that the WUAs operate lawfully and correctly in cooperation with the public in the interests of the beneficiaries, because the state made the investment with the objective of ensuring that farm households and rural communities benefit.

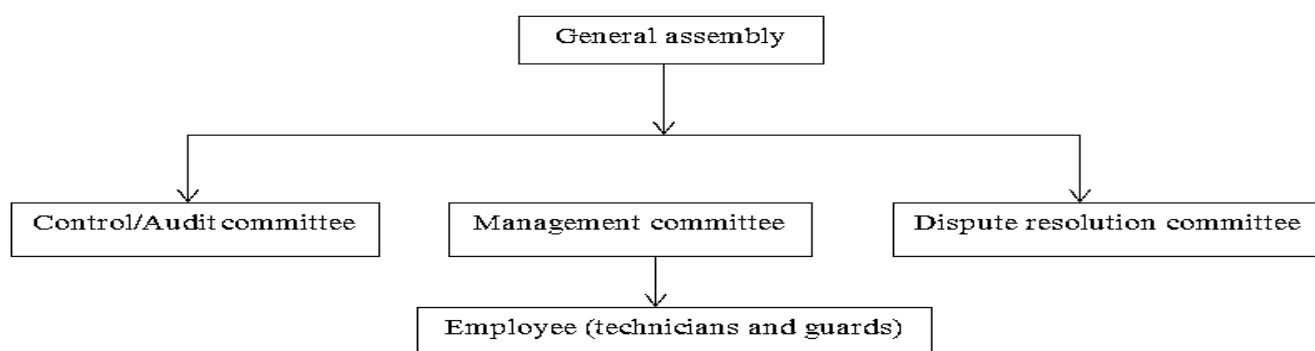
#### **Institutional framework of the WUAs:**

- The WUAs were granted a water-use right after the infrastructure was completed by the government;
- Beneficiary farmers contribute to the cost of operations and maintenance or repair work (in the form of money, labour and/or materials), and pay electricity fees based on plot size, or per hour in some furrow-irrigation schemes;
- The WUAs have their own by-laws developed with the support of the Woreda Farmers' Cooperative Association and approved by the 'general assembly' of the association, which is the supreme decision-making body of the association. The by-laws define the roles, tasks, rights and responsibilities of the WUAs, and the committees and their members;
- The WUA leaders, 'management committees', consist of about 11 members elected democratically by the general assembly to oversee and supervise the activities of the association; furthermore, there are different sub-committees under the main management committee;
- The committee formally meets monthly to discuss irrigation and farming-related issues in their scheme; however, they may hold extraordinary meetings at any time if necessary;
- There is an annual general assembly to assess progress and agree on a work plan for the year ahead. In addition, there are also quarterly and mid-year evaluations (*gimgema* in Amharic) of performance with all members of the association;
- The WUAs have legal status and enter contracts, and enforce sanctions/punishment against members who break the rules and regulations of the association;
- The close involvement of the WUAs has resulted in increased accountability, transparency and responsibility because of a developed sense of ownership in irrigation infrastructure;
- The WUAs tend to be responsible for providing services related to water distribution and the provision of agricultural inputs such as fertiliser and others to their members via the Farmers' Cooperative Association Agency and development agents (or extension workers);

- They enhance communication between users and the extension agents, i.e. the Woreda Water Resource and Agricultural and Rural Development Offices, Cooperative Agency, and other stakeholders.

The roles related to the WUAs can be divided into three major categories: (1) governance (irrigation-scheme management) related to the general assembly; (2) facilitating operations and the maintenance process; and (3) organising different management committees (see Figure 5.8). Some of the management responsibilities of the WUAs are to plan, implement, and monitor their activities, water distribution plans, and budgets related to operations and maintenance, the charging of electricity fees and other financial aspects. Based on the characteristics of the WUAs, the institutional frameworks (internal structure of the association) and roles of the WUAs are presented in the following figure.

**Figure 5.8: Internal structure of the WUAs in the study area**



Some functions of the WUA committees:

- Irrigation-water scheduling and equity (assured equal water distribution among beneficiaries);
- Protecting their irrigation system/scheme from any damage as far as possible;
- Improve communication (serve as a bridge) between farmers and local government organs, such as the Woreda Agriculture and Water Resource Offices and Farmers' Cooperative Agency;
- Promote member farmers' economic activity by increasing productivity using irrigation;
- Promote agronomic management practices, including fertiliser and other input utilisation in collaborations with the development agents.

Beside the formal institutions of the WUAs, the farm households have their own traditional dispute-resolution mechanisms (irrigation-water governance systems) related to water distribution, as well as equity and efficiency, which has been practised in the community for a long time in their spate irrigation and river-diversion forms of water management. It was confirmed in the current study that the role of the WUAs was supplemented by the indigenous irrigation-management practices. At the community level, customary/indigenous institutions are preferred to the formal institutions to share their experiences; to address their economic and social problems because these institutions are easy to access; they are not complex, are very flexible and credible, and have low transaction costs (cost effective) compared to the

formal institutions. The evidence from the study confirmed that communities tried to settle many of their disputes relating to the equity and distribution of water using their traditional ways of negotiating before going to the WUA committees. This confirms that the Raya Valley groundwater irrigation schemes are governed institutionally by co-ownership of the state and the beneficiary farm households, and the integration of both formal and indigenous institutions.

As the survey revealed, the WUAs that are democratically set-up institutions by water-user households in a command area and they have legal status to enter contracts, and the necessary authority to manage an irrigation system (partial or whole); they operate and maintain irrigation infrastructure; and they have administrative and financial autonomy. The management structure of the WUAs is similar across all the irrigation schemes in the project area. Designing institutions for irrigation-system governance is challenging and complex. It requires skills in understanding how rules produce incentives and outcomes in specific physical, economic, and cultural environments. An internal challenge was that socially and economically powerful groups could resist the actions of the WUA committees to enforce the existing by-laws. Hence, it is necessary to invest considerable time and resources to learn more about how various institutional rules affect the users' behaviour, where these users are heterogeneous in their attributes and capacity to bargain for changes to the rules.

The WUAs have the potential to perform their basic functions but for this to be sustainable, the members and the management committees need training, consultation, support services, and a proper legal basis to enable them to function effectively. Effective institutions are required at all levels for the sustainability of the resources and maximise the benefits for the beneficiaries. These institutions are responsible for ensuring irrigation productivity and efficiency, planning irrigation development, managing the negative impacts of irrigation schemes, formulating and implementing policy directives and funding to ensure sustainable management of the irrigation structures. The historical bias towards providing infrastructure investment without ensuring effective institutions is a major cause of poor irrigation performance and unsustainable management (Faurès et al., 2007). Institutional arrangements have failed due to insufficient resources (human and capital), a lack of political support, a lack of proper involvement by water users, a lack of capacity building, and low community awareness about the actual benefit of the institution on their livelihood.

In addition to the specific irrigation-scheme management, community-based watershed management (physical and biological soil and water conservation activities, such as gully reclamation to reclaim eroded areas and gullies, area enclosure and forestry by local communities, and the rehabilitation of degraded patches) would be a significant factor in making agriculture the driving force of economic development. This indicates that the role of irrigation management institutions goes beyond merely managing irrigation infrastructure and practices, but involves natural-resource conservation and watershed management through the mobilisation of their members in collaboration with the local government. Natural resource and watershed management are indispensable to increase the recharge of groundwater resources and streams, and

to realise environmental rehabilitation, which increases the aesthetic value of the ecology and improves the agricultural environment. Given the current favourable rural-development, framework and the government's aim to make agriculture the driver of economic development, community-based watershed management offers a promising outcome to increase the irrigated area across the regional state. Some of the opportunities derived from practising natural resource and watershed-management programmes are: (1) they reduce the farmers' dependency on rain-fed agriculture by using different water-harvesting techniques for irrigation purposes. (2) They prevent soil erosion/degradation and land degradation by addressing flooding and sedimentation. (3) They tackle water shortages and moisture stress by consolidating soil and water conservation practices. (4) They separate/enclose the local communities' grazing land and fodder crops for livestock, or encourage zero grazing to protect environmental degradation. (5) They boost the role of the communities' participation in environmental protection and water-resource management.

The failure or sub-optimal operation of small-scale irrigation schemes generally related to structural/infrastructural (hardware) and/or management (institutional) issues. Poor water management practices, the farmers' lack of skills/awareness, and a lack of proper support services for modern agronomic management have constrained the productivity of the farm households. Integrated irrigation development with proper watershed management practices are needed for sustainable irrigation water utilisation in the studied area, which is an environmentally degraded part of the country. It is vitally important to have diverse institutional options at different levels, integrated with local-level indigenous institutions, to strengthen the watershed management practices to sustain the water resources and, thus, the benefits of groundwater irrigation.

### **5.11 Discussion and summary**

The Ethiopian developmental state set ambitious goals for economic development, prioritising agriculture-based industrialisation. This is evident in the main, long-term, economic development strategy called ADLI (MoFED, 2002b; Ohno, 2009). Not only is agriculture at the centre of the development policy but it is also a significant contributor to the country's economy. The development of irrigated agriculture is considered as one of the main pro-poor and pro-rural development programmes, involving the community at the local level in 'public development work'. The developmental state has tried to put significant public funds into enhancing the productivity of smallholder farmers, strengthening the factor and output markets, expanding the amount of land under irrigation, thus reducing the level of poverty and the number of food-insecure households.

The development of irrigation infrastructure can have either a positive or a negative impact, depending on the sustainable use of the resource. If the irrigation infrastructure is used and managed properly, it will possibly continue to contribute multi-dimensional positive benefits to farming households and the economic development of the country. Equally, irrigation development could have negative consequences (i.e. negative environmental effects and social instability) if the water resource is not managed in a sustainable manner and

is used inefficiently (Awulachew et al., 2007; Dinka et al., 2014). The extensive environmental conservation activities undertaken through the public-work programme helps to rehabilitate the degraded environment, supports the revival of dried rivers and streams, and recharges groundwater resources for irrigation purposes. Smallholder farmers have started to divert rivers to irrigate their farmlands for vegetable and crop cultivation to satisfy their consumption needs, and to diversify their income by increasing their productivity. This indicates that the state is trying to do its best to support smallholder farmers to participate in rural development programmes to ensure food security and improve their socio-economic situations.

Irrigation is considered as one of the important agricultural inputs for increasing the productivity of smallholder farmers. Hence, the investment in irrigation should properly target and complement by improvements in the application of modern agricultural farming. Institutional, agronomic, human, and environmental factors ultimately determine the success of irrigation projects (You et al., 2010). There are both a direct and an indirect relationship between government policies (such as investment in irrigation infrastructure) and households' well-being. The direct effects have been seen in the production and consumption behaviour of the households, while the indirect effects cover different dimensions at both household and community levels. Public investment in irrigation improves agricultural productivity and has a positive impact on household income diversification and poverty eradication. The availability of reliable and adequate irrigation infrastructure at community level increases employment opportunities, which reduces poverty and inequality, and increases agricultural output supply to the nearby local markets. Thus, landless farmers as well as smallholder farmers' work more days per year, which ultimately contributes to food security, the eradication of poverty, and non-beneficiaries benefiting from an augmented supply of agricultural outputs (Kumar, 2003; Hussain & Hanjra, 2004). For instance, Hussain and Hanjra (2004) showed that access to irrigation enables farmers to adopt new technologies that lead to higher productivity and increased household income. Irrigation also generates new on-farm and off-farm employment opportunities, which has a positive effect on income at the household level.

Reliable irrigation schemes lead to crop diversification and to the cultivation of high-value, horticultural crops in addition to staple food crops. Income of the farm households can be augmented by improving the production of irrigated agriculture. But output and input markets are fragmented and informal brokers exercise excessive power and set market prices, usually to the detriment of the farmers, who have weak bargaining power and generally must accept what the buyers offer. The problem is heightened during the harvest season when farmers cultivate high-value but perishable cash crops. Poorly developed supply chains, high transaction costs, and lack of information about the actual and future market situation are some of the identified constraints, which resulted in the spread of inconsistent information, and uneven power relations between sellers (farmers) and buyers in the market. Moreover, in the Raya Valley, the absence of proper warehouse/storage facilities (particularly for perishable products) is a major cause of price fluctuation and results in income loss for the farmers. Smallholder farmers produce and supply their cash crops at a local market with incomplete market information (both actual and predicted market price) and low bargaining



power on the price of their output. The inability to secure a reliable market has discouraged many beneficiary farmers from investing further on their irrigated farm, which, in turn affects the productivity of the irrigated farmland. Now marketing of agricultural outputs is done on an individual basis, and the prices of cash crops fall significantly during harvesting time when there is excess supply.

Therefore, the Ethiopian government and other stakeholders need to address the marketing problems to boost benefits from the groundwater irrigation. It should also provide transport infrastructure, support producer associations to boost the bargaining power of the producers and initiate the development of agro-processing industries, either by the farmers' cooperatives or by the private sector to address the imbalance in demand and supply during the peak production season. By investing in agro-processing sub-sectors, cooperatives would add value to the farmers' produce and address the problems of the price volatility of agricultural produce, and serve as a niche for industrialisation and rural transformation. In addition, the government and stakeholders working with rural development should encourage effective farmers' organisations (or producers' organisations) to share experiences (information) and address problems, and to accelerate resource transferrals between the rural and urban sectors. Effective organisations could also strengthen the government's commitment to rural development and transformation programmes. Addressing the marketing issues would improve the income of beneficiary farmers and enhance their perception of further investment because they would be able to cover their operational costs with less pressure on their assets and increase their asset holdings.

The groundwater irrigation infrastructure in the studied area uses electricity. Power shortages (due to interruption of power supply) and a lack of transformers are among the critical problems preventing the optimisation of the hundreds of deep wells that have been drilled, and discouraging the development of more wells to maximise the existing water potential for irrigation. Thus, the government needs to supply sufficient electricity from the national grid and address the problem of transformer supply to utilise fully the potential groundwater resources in a sustainable manner to mitigate the effects of climate change in the drought-prone area of the Raya Valley and elsewhere. Increasing the supply of rural electrification is not only crucial to develop groundwater resources for irrigation purposes but also improves the livelihood of the rural community. Therefore, the government need to address problems related to rural electrification to facilitate rural transformation.

Other challenges in the in the Raya Valley include the frequent breakdown of motor pumps (scheme machinery), and a shortage of spare-part suppliers and technicians (enterprises) close to the project area to provide the necessary repair services. This makes it difficult and time consuming to repair the machinery. When farmers face such problem, they are forced to travel to the capital of the regional state, which is 160–180 km away, to get spare parts and professional maintenance services because there are no private or state enterprises nearby to supply such services to them. This situation has exposed the beneficiary farm households and their WUAs to unnecessary financial and transaction costs, which is sometimes beyond the

capacity of the WUAs. Therefore, the government must address these problems by setting up institutions (state or private) to deliver such services close to the project area.

Despite these constraints, the combination of factors such as access to credit, educated household members, input supply by cooperative associations, and access to extension services have had a positive effect on increasing the efficiency of irrigated farming. For instance, educated farmers have relatively greater managerial ability, are better technology adopters, and know how to use modern agricultural farming practices and to improve their productivity. They can interpret the information needed to respond to market signals, i.e. they practise crop diversification and intensification to minimise risks related to the market. In contrast, uneducated farmers are more reluctant to adopt new farming techniques because they are uncertain and risk-averse. Therefore, improving farmers' practical educational status by expanding adult education programmes would be an appropriate policy instrument to improve the production efficiency of irrigated agricultural practices and transform rural communities. Furthermore, access to affordable and timely credit has a significant positive effect on irrigated agriculture because it lowers the financial constraints of the farm households, and improves their market participation and competitiveness (Gebregziabher, 2008). It is important to build and strengthen the links among key institutions involved in agricultural development at all levels to ensure packaged interventions on the frontline. These include agricultural research institutions, extension services, input suppliers (farmers' cooperatives and individual suppliers), and output marketers, rural credit institutions, private investors and educational institutions.

Groundwater irrigation offers the potential to mitigate the effects of drought and reduces crop failure because groundwater is often less vulnerable to drought than other types of irrigation due to less exposure to the external environment. Irrigation has positive effects on income and employment and this has a tremendous multiplier effect on the overall economy due to increased household spending. In other words, not only the agricultural sector is improved but the industrial and service sectors also improved because of sectoral forward and backward linkages. In short, irrigation has had a significant impact on the eradication of poverty, achieving food security and accelerating overall rural transformation.

To realise all these benefits of irrigation, stakeholders at all levels must focus on the sustainable and efficient use of water resource. This requires effective institutional arrangements, especially at the service points, i.e. where the irrigation infrastructure is found. Countries use different institutional arrangements to manage their irrigation infrastructure through the integrated government–farmer organisations such as WUAs, irrigation boards and irrigation cooperatives. These mechanisms are known as irrigation management transfer or participatory irrigation management models and are based on a country's specific political, economic, and climatic contexts. Developing local leadership capacity, context-specific institutions, and the awareness of the farm households is essential for the success of this approach.

In the case of Ethiopia, the institutional arrangements for water-resource development and management depend on different layers, for instance: (1) policy-makers and standard setters at federal level (the Ministry

of Water Resource and Energy) for large and medium-scale irrigation development projects; at regional level, the Bureau of Water Resources plans, finances and constructs small-scale irrigation development projects. (2) service providers at the local (district) level are the offices of Water Resources and Agricultural and Rural Development; and (3) the beneficiary farm households and their organisations (WUAs), local officers like DAs, village leaders, etc.

However, the institutional arrangements for water resource management in Ethiopia have undergone through frequent changes due to various factors at different state administrations. For instance, lack of institutional stability associated with frequent changes in responsibilities and staff turnover, a shortage of qualified staff (i.e. engineer, hydrologists, surveyors, agronomist), and the subsequent lack of experience in planning, designing, operating and managing large and medium-scale irrigation development projects (Negash, 2011). Therefore, as discussed in section 5.10, the Raya Valley groundwater irrigation schemes have co-owned and governed by the state and the beneficiary farm households, and the integration of both formal and indigenous institutions to ensure equity distribution and sustainability of the resources/infrastructure.

**Table 5.10: Summary on the role of state in groundwater-irrigation development**

| Indicators and descriptions/activities by government and the beneficiaries                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
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| <p><b>The official development ideology &amp; practices</b></p> <ul style="list-style-type: none"> <li>• The state officially claimed a developmental state model as per the context of the country;</li> <li>• The state adopted ADLI as a long-term development strategy supported by consecutive, five-year development plans;</li> <li>• Implementing the agricultural development programmes emanated from ADLI via empowering individual farm households to improve their farming practices;</li> <li>• The state showed its commitment for the implementation of rural development programmes to realise tangible transformation from the bottom up;</li> <li>• Under the long-term ADLI development strategy, attention is given to the development of small-scale irrigation to boost productivity of smallholder agriculture, to improve the status of food security, and to eradicate poverty from the rural area.</li> </ul> <p><b>Leadership or management of groundwater resources</b></p> <ul style="list-style-type: none"> <li>▪ Relatively committed and visionary leadership, broad-based development programmes, and local resource development and utilisation are given proper attention under the rural development policy and strategy of the country;</li> <li>▪ The state tried to create a broad section of state–society coalitions, and allow the involvement of the community to strengthen institutions, and to participate in local development programmes;</li> <li>▪ The WUAs are the main local institutions responsible for the governance of groundwater-irrigation schemes with cooperation of other local government institutions and indigenous irrigation-management committees.</li> </ul> <p><b>The role of the state for the development of groundwater-resource for irrigation</b></p> <ul style="list-style-type: none"> <li>• The state tried to invest substantial public funds in the installation of irrigation infrastructure but the beneficiary</li> </ul> |

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smallholder farmers are responsibility for operations and maintenance;

- Irrigation is considered to be one of the crucial agricultural inputs to boost the productivity of the smallholder agricultural sector;
- The Raya Valley groundwater irrigation project is developed in one of a development corridor identified in the regional state of Tigray, and the government has tried to develop the resources for the benefit of smallholder farmers;
- The state encouraged the establishment of WUAs (water-user cooperatives) to ensure sustainable management of irrigation schemes and co-ownership of the resource by the involvement of the beneficiary farm households.

#### **Motivation of using groundwater for irrigation purpose**

- Regional/federal governments supported the development of shallow- and deep-well, groundwater irrigation where the potential is available, as well as other irrigation infrastructures;
- Groundwater irrigation is considered as one of pro-rural development programmes, as well as a tool to mitigate the effects of climate change in drought-prone areas like the Raya Valley area; i.e. it lessens the reliance on rainfall-dependent agricultural production systems;
- Public investment in groundwater irrigation infrastructure is seen as crucial tool to enable smallholder farmers to realise rural and capital transformation. For instance, the Raya Valley groundwater irrigation is developed by public investment to improve smallholder agriculture, and other basic services like extension services, health, education, rural credit provision, and the supply of modern agricultural inputs to smooth the rural transformation process and distribute resources/wealth to the rural areas.

#### **Stimulating the recharge of groundwater resource for sustainability**

- Increasing investment in natural-resource conservation (watershed development) and management by mobilising the community during the free campaigns every year, and using conditional social-welfare programmes, PSNPs, for this purpose;
- Public works, for instance, soil- and water-conservation programmes are considered as fundamental pillars in the overall environmental rehabilitation and to increase the recharge capacity of groundwater resources in the studied area;
- Developing the awareness of the beneficiary farm households to use the resources in an efficient manner, and to practise modern agriculture, this helps to increase the recharge capacity of the groundwater resource.

#### **Economic benefits of groundwater irrigation**

- Crop intensification and diversification have been undertaken by the beneficiary farm households since they started practising groundwater irrigation, boosting their productivity and their income;
  - Using irrigation as one of agricultural inputs, increased the supply of cash crops at the local and regional markets, and positively contributed to price stabilisation;
  - Beneficiaries achieved food self-sufficiency at the household level, i.e. they covered their food demand throughout the year since using the groundwater irrigation infrastructure;
  - Beneficiary farm households started to accumulate assets, allocate the required resources to increase their productivity and improve their living conditions;
  - The beneficiary farm households created considerable, seasonal, rural-employment opportunities during the whole production season;
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- Farmers have been empowered by getting them organised into formal and informal groups (social capital) based on their common interests. These institutions are used as a tool for information sharing in their day-to-day life, and to address their social and economic problems;
  - The groundwater irrigation infrastructure creates a development opportunity for the rural community, which helps to ensure equity in terms of resource sharing and improving the living conditions of the beneficiary households.
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Source: Compiled by the author

To summarise, the Ethiopian state has invested considerable public funds in building the rural infrastructure required to accelerate rural development to eradicate poverty and enable smallholder farmers to achieve food security (CSA, 2012; World Bank, 2014)). For instance, extensive investments in irrigation infrastructure have had multiple of socio-economic benefits beyond the beneficiary farm households due to the positive spill-over effects such as generating seasonal employment opportunities at the community level, producing surplus agricultural outputs and boosting the consumption and saving of the rural communities. This has facilitated rural transformation by improving food security, alleviating poverty, and accelerating overall economic transformation at both the household and national levels. For instance, groundwater irrigation offers the potential to mitigate the effect of drought and erratic rainfall on agricultural production. It is considered as one of a pro-rural development programme, which plays a critical role in improving the living standards of the rural households by reducing food shortages and lifting them out of poverty by boosting their level of production. It further offers the opportunity to switch from the production of low-value staple crops to high-value agricultural outputs.

## CHAPTER SIX: CONCLUSION AND RECOMMENDATIONS

### 6.1 Introduction

In the earlier chapters, the theories of institutions and the mainstream conception of a developmental state, the need for, and the rise of the developmental state were discussed. They also provided an overview of the African economies since independence and the significance of a developmental state in Africa as one of the promising development paradigm. This followed by a discussion of the role of the emerging developmental state in Ethiopia, with an emphasis on groundwater irrigation and governance as a case study to examine the potentials and the limitations of institutional environment/arrangements.

Many Africa countries have faced different structural problems and institutional constraints because of adopted and practiced non-context-specific development models. African countries need to reject the current neoliberal and non-context-specific development model if they want to achieve reliable socio-economic and political transformation. Economic development and the idea of institutional quality lead to the success or failure of economic development. It has been acknowledged that, state intervention is necessary for socio-economic transformation, particularly in developing countries where there is a need for proper state–market integration. Research has confirmed that state intervention in the form of the developmental state, limits the negative effect of a market dominated development approach, and can achieve an overall structural transformation (economic, political and social) in these countries if they adopt the model based on their respective contexts.

This study is motivated by the observation that a developmental state ideology, aided by appropriate institutions, is important for long-term economic development in latecomer African countries in the wake of the failure of the neoliberal development model. For this reason, given the emergence of states in Africa defining themselves as ‘developmental states’, it is necessary to assess these claims critically, considering the literature on the developmental state, particularly from an institutionalist perspective. Consequently, the question seeks to address in this study is how the concept of a developmental state is interpreted in the African context. More specifically, the general objective is to assess how the developmental state paradigm has determined the institutional environment for achieving economic development in Africa through a case study of the Raya Valley groundwater irrigation system. Both quantitative and qualitative data were used from primary and secondary sources to address the research question and to satisfy the objective of the study.

Therefore, this concluding chapter addresses the mainstream conception of the developmental state and its institutions, as well as the role of the developmental state in accelerating African economic development. A few points are proposed to strengthen the role of the developmental state in the African context and, lastly, few points will forward for further study to assess critically the role of the developmental state by considering the diversity and exceptionality of African countries.



## 6.2 Conclusions

### 6.2.1 *Mainstream conception of a developmental state and institutions*

A review of the literature on the theoretical and empirical evidence related to the mainstream conception of the developmental state and institutions was addressed in Chapter 2 of this study. As described by several researchers, the developmental state has become one of the alternative development ideologies for latecomer African countries. A developmental state is a state that promotes macroeconomic stability, establishes an institutional framework that provides law and order, an effective administration, promotes public investment in infrastructure, and boosts human-resource development by investing in the social sector such as education and health. Furthermore, a developmental state is described as one that can deploy the requisite institutional architecture and mobilise society towards the realisation of its development projects.

The developmental state facilitates structural transition from an agrarian to a modern society. It plays a social engineering role to derive long-term economic development to achieve a high level of social well-being. The distinctive political and institutional model of a developmental state should be seen as an alternative to a wide range of political economies with different levels of state autonomy, institutional coherence and authoritative penetration, with varying degrees of accountability and ‘embeddedness’. Even though the developmental state has a long history, the model only became a real alternative development model in the 1950s. In the late twentieth century, several East Asian countries transformed their economies by using the developmental state model in accordance with their respective contexts. Consequently, the developmental state has been acknowledged as a new, alternative development ideology (although it is not the only one) that contributed to the successful development of several countries in East Asia. In addition, the developmental state ideology has appeared in different parts of the world with varying degrees of success, adjustments, and variations.

Considering these contextual differences, some common features of developmental states have been identified from the literature, based on the success stories of East Asian countries (see sub-section 2.2.2). These common features would serve as a point of departure for the newly emerging developmental states, which should then consider the political, economic, social, and cultural contexts. Empirical evidence confirms that there are numerous (internal and external) factors contributed to the success of the East Asian developmental states, including the following:

- The existence of committed political elites and a competent state bureaucracy accompanied by far-sighted and context-specific institutions;
- Developmental policies and strategies that originate from internal (local) problems;
- The adoption of an export-led development strategy creating economies of scale and production efficiency;
- Substantial amounts of investment devoted to the development of human capital;

- Considerable attention given to nurture domestic private sectors to strengthen the national capital formation based on a clear ‘carrot’ and ‘stick’ approach;
- Agricultural land reform (which depends on the domestic political condition), accompanied by the introduction of modern agricultural practices to transform the rural population and ensure relatively equal resource distribution.

Equitable resource allocation is imperative to reduce poverty and create an egalitarian society, if it is accompanied by high productivity in all sectors of the economy. Moreover, an advantage of geopolitics at the time of the Cold War was that East Asian states received a substantial amount of economic and military aid from the United States, as well as market opportunities for their commodities in that country. FDI, mainly from the developed countries or from the West and from the first-tier of NIC to the second-tier NICs, also played a significant role in the economic development of these states. For instance, Japan, which was a first-tier NIC, invested in the second-tier of NICs and this type of investment played a considerable role in regional economic transformation and integration.

Therefore, the practices of Asian developmental states serve as a good development experience and open an alternative development pathway for the latecomer African countries to adopt a contextual developmental state ideology to accelerate their development processes. The developmental state is an active manager of the development process and promotes fair resource distribution among all economic actors via intensive public investment. The functions of the developmental state go far beyond the conventional sense of merely correcting market failures, rather playing a role like promoting/regulating market, encouraging capital formation and transformation. However, there is no single organisational formula or blue print that other developing countries can adopt the developmental state ideology. The current emerging African states should examine some of the common features of the Asian developmental states and adapt to their own political, economic, and social contexts to accelerate their development process and assure social transformation.

To build a successful developmental state, latecomer countries need to acknowledge the role of institutions, which are essential for economic development and social transformation; in turn, economic development shapes existing institutions and nurtures new ones that can satisfy the demands resulting from economic development. Almost all schools (the OIE, NIE, and IPE) acknowledge the role of institutions in economic development, irrespective of their outlook, whether orthodox or heterodox. Institutions shaped and influenced by the economic and political trajectories’ of nations. In turn, institutions shape the economic and political situation of a country. As discussed in sub-sections of 2.3.2 and 2.3.3, the main difference between the NIE and IPE regarding institutions and individuals, institutions and economic development, and institutional diversity are:

- Proponents of IPE postulate a two-way causation between individuals’ motivations and social institutions, rather than a one-way causation from individuals to institutions (individual rationality theory) advocated by the NIE.

- NIE proponents assume that the causality runs from institutions to economic development, ignoring the possible effect of economic development on institutions whereas the IPE assumes a two-way causation from institutions to economic development and from economic development to institutions.
- IPE proponents emphasise the role of the state and diverse institutions in sustainable economic development and transformation by enhancing public-resource mobilisation and allocation, whereas NIE proponents advocate a minimalist role of the state in the economy and the supremacy of market or simply the market institution.
- The NIE School claims that markets can and should be free from politics, whereas the proponents of the IPE says that the market is ultimately a political construct and, thus, depoliticisation of the market is impossible in practice.

Although institutions are essential for accelerating development, developing countries still have little understanding of the relationship between institutions and economic development. Success stories have confirmed that a mixture of a country's innovations, adoptions, social, political and development status, as well as its learnings, are essential to grow appropriate institutions. This means that institutions and institutional capacities are socially engineered, based on 'trial and error', and there is no 'one-size-fits-all' approach; this is why institutions that are successful in one place may not be successful in another. States that build effective and diverse institutions (social, cultural, economic, or political) facilitate social cooperation and channel resources to boost productivity and this has a considerable impact on accelerating the development process. Inappropriate institutions are the cause of failure in many developing countries so it is important to emphasise a country's institutional architecture and policy orientation when constructing a developmental state in latecomer countries.

### ***6.2.2 The significant of developmental state in Africa***

Before addressing the significance of developmental states in Africa, it is important to note a few points on the background of African economies, post-independence. In the immediate post-colonial period of the 1960s and early 1970s, most SSA countries had strong governments that took the task of nation building and development seriously. Many of these managed to achieve positive and robust rates of economic growth for more than a decade until the late 1970s (Sindzingre, 2004; UNCTAD, 2007). However, this robust growth was not sustained due to the two consecutive oil crises, followed by a debt crisis in many African countries. This led to the onset of the SAPs, which caused a further decline in economic growth for the remaining two decades of the twentieth century.

Soon after independence, Africa's state-led development models failed to build a strong state to achieve sustainable economic and social outcomes. Most countries could not engineer economic 'take-off', ensure industrialisation, or diversify their economies. Aside from the external factors, the internal factors such as the rise of authoritarian military dictatorships (from internal wars and conflicts) and one-party regimes created

an obstacle to building a hegemonic development ideology and coalitions. Most of the regimes lacked strategic partnerships with the indigenous private sectors and the society (Mkandawire & Soludo, 1999). Following this economic recession, almost all African countries (except for those entered the socialist sphere of influence) were forced to adopt the SAPs as a panacea for their crises. However, these programmes did not bring the expected economic recovery and growth, in short, did not make much difference.

After two lost decades, there was a turn around and Africa began to experience relatively strong and sustainable economic growth by taking the role of state into account. The period after 2000 marked the beginning of the African growth miracle and so-called ‘African Renaissance’. On average, the SSA economies expanded by 4.6% of GDP per annum during 1999–2010 (5.2% excluding South Africa, which had the lowest growth rate during this period). The region’s economic growth is underpinned by relatively strong public and private investment. Gross fixed-capital formation in the region steadily increased from about 16.4% in 2000 to 20.4% in 2011 (World Bank, 2013a; Thorbecke, 2014). However, the quality of this economic development is still poor and the economic recovery has not created adequate employment opportunities to reduce poverty and inequality.

By any standard, the level of poverty in Africa is unacceptable and, therefore, African countries need to make an extraordinary commitment to reduce (or hopefully eradicate) poverty. The continent’s economy demands further diversification and transformation to address economic problems and to bring about sustainable economic development and structural transformation in all sectors of the economy. Therefore, to transform the current relatively rapid economic growth into a sustained and inclusive development process, African policy-makers need to adopt development policies and strategies that foster economic diversification, create decent job opportunities, reduce the level of poverty and inequality, and improve access to basic social services.

In general, transforming African economies from low-income agrarian to high-income industrialised economies remains a major development challenge and need to put it at the forefront of the development agenda. Historical evidence showed that countries that have successfully transformed from agrarian to modern economies, states played a proactive role in designing and implementing policies that facilitate diversification and transformation. The so-called free market and privatisation of public enterprises did not generate the required investment to expand output, exports, and employment during the era of the SAPs. Therefore, African states urgently need to design and implement policies to restructure their economies based on the real alternative paradigm that integrates the role of the market and the state. It is clear that they need to shift their development ideology that does not fit to their contexts to transform the existing predatory and rent-seeking political economies into developmental ones.

Therefore, the need for looking an alternative development model, like, a developmental state should be adopted to tackle the existing predatory and rent-seeking political economies. The assessment of the need for and the adoption of developmental state paradigm in Africa arise from both the literature of the mainstream

conceptions the developmental states and from the African perspective via rethinking the potential role of the developmental state. The developmental state literature might best be viewed as an organisational framework for beginning to examine whether the state can do it and what precisely it is that the state has to do (Fine, 2010). The developmental state became prominent by the turn of the twentieth-first century in counter-position to the SAP/Washington Consensus in theoretical and empirical terms (Fine, 2016). The recent 2007/08 worldwide financial meltdown has made many African scholars and policy-makers rethink the potential role of the developmental state in Africa. Therefore, it is important to acknowledge that the current financial crisis has substantially increased both the role of the state and its prominence in economic affairs. Likewise, enormous research outputs from the mainstream conception of the developmental state advocated about the critical role of the state in fostering development.

The developmental state – as an alternative paradigm proven effective assessed by the yardstick of the dynamic growth experiences from East and Southeast Asia, Latin American and SSA countries. With pockets of developmentalism taking place around the world, there is a renewal of interest in the developmental state related a quest by African leaders to arrest and change the pattern and trajectory writ large in the chaos and aftermath of economic decline. The developmental state played a decisive role in many of East Asian countries (in general) and in few Latin American and African countries (in particular) that forced the World Bank to acknowledge that there might be something different about the role of developmental state as an alternative for developing countries. There is no doubt that the developmental state paradigm is a well-recognised alternative to the neoliberal model (Fine, 2010; 2011). Although the developmental state becomes an alternative development strategy in many African countries, the discourses related to the developmental state in Africa pivoted on impossibility and possibility thesis. As discussed in sub-section 2.4.2, the proponents of the ‘impossibility thesis’ say that African states would not be able to replicate the success stories of other developmental states because of different internal and external factors, such as:

- The institutions of the East Asian developmental state are contextual, time-specific and beyond emulation;
- The developmental state is unfamiliar to Africa, but unique to East Asia because it was made possible by ‘Confucian societal values’;
- Many of the African states are not committed to development and many of them are captured by special interest groups;
- African states simply do not have enough human resources and technical capacity to pursue the developmental state model;
- Rent-seekers and corrupt officials who prioritised their private interests over societal interests rule many African countries;
- Globalisation almost closed the window for state interventionism because it left little room for states to intervene in their respective economies.

The impossibility argument emanated from the proponents of a neoliberal ideology, which advocated a ‘one-size-fits-all’ approach, regardless of the different contexts of countries. However, the neoliberal ideology that imposed on many African countries as a panacea for their economic crises had a disappointing outcome because it was not in accord with their contexts. In contrast, the proponents of the developmental state in Africa asserted that the current external and internal environments are relatively open (if not very conducive) to the adoption of the developmental state model. They said that the inadequacies of the free-market development model in Africa have promoted the role of competent state intervention and that it is possible to learn from the experiences of other developmental states. Because of the well-documented history of corruption, coups, conflicts, rent-seeking and authoritarian rule in Africa, they see the developmental state ideology as an effective strategy to address challenges and exploit the development opportunities to eradicate poverty and achieve overall transformation. Hence, the feasibility of a developmental state in Africa has become a subject of interest for scholars, development practitioners, international institutions, and African decision-makers alike. Many scholars agree that pure capitalism does not work in Africa, and that socialism is out-dated, even though it was considered better by some. Likewise, many African political elites and decision-makers are close to reaching a consensus that the developmental state is a much better option than making marginal adjustments to the existing neoliberal model. However, the developmental state theory is not merely a recipe for the advancement of a nation; rather, it is a state ideology promotes development although the success of the model depends on various factors.

For instance, it is essential to have diverse institutions for a developmental state to be successful. However, the capability of leadership in building effective institutions and networks of institutions across all sectors remains the main challenge in many African countries that want to adopt the developmental state model. ‘Getting institutions wrong’ would result in the failure of a developmental state. Establishing the right institutions will enhance the capacity of the state to promote its development efforts. This requires two considerations: (1) ‘develop a more adequate vision of how institutions shape economic behaviour and outcomes’; and (2) ‘create a more systematic and general understanding of how institutions themselves formed and changed over time related to overall change in the economy’. Therefore, better social cohesion (broad state–society coalitions) produces better institutions and these, in turn, lead to higher levels of growth and a more equitable distribution of economic resources among economic agents.

Building effective institutions and strengthening the institutional capability will help to ensure long-term sustainable development projects to realise economic transformation. The political elites of the emerging developmental state in Africa should be committed to build well-functioning institutions by either modifying the existing ones, or by nurturing new institutions. This requires socially engineering and the commitment of all stakeholders, particularly from the state. When building institutions, African states need to consider the following points: (1) they should avoid institutions developed in the past, which are not compatible totally with the current situation; (2) they need to make the existing institutions more compatible with the current situation; and (3) they need to nurture new institutions based on their own context. Institutions that are



dynamic or flexible will change depending on the political, economic, and social dynamism of the given country.

Developmental states are not new in Africa; for instance, Botswana and Mauritius became exceptionally successful developmental states in the twentieth century. Although there are different reasons given for the miracles of these two countries, the existence of committed political leadership, building effective context-specific institutions and adapting the developmental state ideology (good policies) are critical components in the overall success or failure of developmental states. Other SSA countries should examine the practices of Botswana, Mauritius and the East Asian developmental states, adopt some of the common features in accordance with their own contexts, and make good development policy choices. It is obvious that developmental states differ in their evolution, context, trajectory, manifestations and disciplinary origins so every country should pursue strategies that suit their own institutional, economic, political, and social arrangements. For instance, there are two distinct forms of analyses of the developmental state rooted in their disciplinary origins: the political and economic schools.<sup>57</sup> Both schools complement each other, and successful developmental state pursue - in practice – this dual-pronged approach (Fine, 2010; 2011 & 2016).

Almost all African nations were at a similar level of development during post-independence period. However, only the political elites of Botswana and Mauritius that made good policy decisions based on a developmental state ideology. Therefore, the good decisions and policy choices of political elites on growth and transformation, serve as a milestone or springboard for African nations. These are possible only if political elites start looking inward (recognise their internal problems) rather than outward (externalise their problems), and resist any pressure from their former colonial masters and international institutions to hijack their national interests under different terms and tied-conditions. African economies need sustainable growth, removing dependency on the primary sector of the economy, and transformation from the current predatory political economy, which suggests the need to rethink the potential role of the state (i.e. the developmental state) in economic transformation and in accelerating the development process. The existing predatory state should be transformed into a pragmatic and context-fitted developmental state model, which requires the establishment of institutions of pluralism (i.e. institutions that accommodate the interest of all stakeholders). Evidences from research showed that no political transformation is possible without the participation of all group of society in the development process.

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<sup>57</sup> The economic school places emphasis on the role of developmental state (state interventionism) in addressing, if not necessarily correcting, systemic market failures associated with economies of scale and scope, coordination of complementary investments within and across sectors, targeting finance for investment, to harness positive and eliminate negative externalities and so on. For the economic school, strong emphasis is given in identifying the appropriate development policies, with the presumption that they will be implemented by a developmental state because they ought to be. On the one hand, the political school with its own disciplinary origins stems predominantly from within political science and is wholly concerned with whether the state has the so-called autonomy to pursue the development strategy and the institutions and motivation to adopt developmental policies. It is concerned with the nature of the state itself whether it has the potential in general, and the independence in particular, to adopt the necessary policies more or less irrespective of what these might be. Here, emphasis is placed upon the necessity for the developmental state to be free from capture by particular interests and so to be able to adopt developmental policies (cf. Fine, 2010; 2011 & 2016).

In general, developmental states considered to have the capacity to manage the rent-seeking political economy by means of a reward and punishment mechanism based on the performance of economic agents (especially the private sector). The existence of favourable internal and external environments is crucial for the emerging developmental states in Africa. An overall assessment showed that it is possible to build a developmental state in many SSA countries today, and there are several countries, which have officially called themselves a developmental state to accelerate their development process through the right mix of the role of the state and market. The role of the state is not only necessary, but also crucial to accelerate the economic development process where market forces are inefficient and market failures are relatively extensive in Africa. Replicating the success stories of other developmental states is not sufficient for SSA – further policy initiatives put on table by considering the existing external and internal contexts, since some of the practices of other countries may run counter to their national development goals. Therefore, the developmental state model should build based on ‘learning-by-doing’ approach and that it is considered by scholar and decision-makers (politicians) as one of the promising development model for Africa given the diversity and heterogeneity characteristics, as well exceptionality of nations throughout the continent.

### ***6.2.3 The role of the emerging developmental state in Ethiopia***

Having established the ‘uniqueness’ or ‘exceptionality’ of the Ethiopian state formation and project - a ‘state’ that was autonomous and endowed with manoeuvrability as it was and remained under the control and governance of the Ethiopians and not the colonisers like elsewhere in Africa (Geda & Degefe, 2005; Geda, 2008; Fourie, 2011). This indicates that Ethiopia is quite exception in Africa in its state formation, rich cultural heritage and history of resistance to colonialism (independence), religion, enduring sense of independence and exceptionalism, and indigenous social pacts (institutions), which were not assimilated and/or co-opted by colonisers. This does not however mean that the formation of the Ethiopian state was free of political exclusion, economic exploitation, cultural and religious domination. That means the Ethiopian political economy was fractured by internal conflicts, drastic policy changes, and reversals. This distinguished it from other African countries, which are characterised with colonial and post-colonial history. In Ethiopia, the first half of the twentieth century witnessed three distinct regimes: the Imperial/Monarchy, the Derg/military, and the EPRDF. Each regime had its own economic, political, and administrative organisation. When the current ruling party (EPRDF) came to power in 1991, Ethiopia was a ‘quasi-feudal’, one-party socialist state with virtually no experience of representative democracy or capitalism (Fourie, 2011). However, the year 1991 was considered as a turning point to Ethiopia in terms of social, political, and economic changes when new development and reform policies were started to articulate and to implement by the new government. For considerable long time, Ethiopia experienced negative growth under the Derg regime, then in 1991/92 returned to positive but low per capita growth until 2002/03, which was the time that Ethiopian ruling party officially changed its development ideology to the developmental state – the turnaround to high economic growth started (Priewe, 2016). This implies that there had been signs of economic progress at the turn of the twenty-first century but these were insignificant in terms of their impact

on the livelihood of the population. This is why because the initial situation (the time when the military regime discarded) was characterized by backward, an illiterate and impoverished social fabric and so on (Kebede, 2015).

Ethiopia is one of the SSA countries (which is exception in its state formation and overall history) that the ruling party has officially claimed the developmental state ideology and shown a commitment to practice it by customising the ideology into the unique political, economic, social, and cultural contexts of the country. The adoption of the developmental state in the official ideology of the Ethiopian People's Revolutionary Democratic Front (EPRDF ruling party) was/is attracted and inspired by the experiences of East Asian industrialisation of Taiwan, South Korea, Japan, and more recently, China (Zenawi, 2006; Fantini, 2013). Hence, the emergence of the developmental state in Ethiopia has to be viewed with in two broad contexts: the country's successive attempt to learn the developmental paths of different countries, and the global phenomena that led to the realization of the failure of the neoliberal paradigm in Africa (Zenawi, 2006; Fantini, 2013; Lavers, 2016).

'Ethiopia has been keen to learn from countries that have achieved major economic growth through the developmental state approach with the political leadership being unconvinced by the neoliberal economic reform at the end of the twentieth century' (Alemu & Scoones, 2013:5). This implies that the Ethiopian political elites have attracted and convinced by the remarkable economic success of the East Asian developmental states. Following the official claim of a developmental state ideology, the political leadership and the society almost reached in a consensus on the identified common enemy of the country: 'poverty and backwardness'. Accordingly, the state's developmental policies and strategies favour a broad-based path of economic growth as the means of addressing poverty and inequality, which are undesirable and unnecessary socio-economic obstacles of the nation (Lavers, 2016). To eradicate or reduce level of poverty, the Ethiopian state tried to commit itself to investing a substantial amount of public resources in economic and social infrastructure. Investment in infrastructure has a direct spill-over effect on economic growth and poverty reduction and contributes significantly to socio-economic transformation and economic integration among different sectors (Teshome, 2012; Balema, 2014; Oqubay, 2015; World Bank, 2016).

The Ethiopian state development strategies and public expenditure are considered both pro-poor and pro-growth in practice (CSA, 2012; Teshome, 2012; Balema, 2014; World Bank, 2016). The Agricultural Development-led Industrialisation (ADLI) is a cornerstone of its development policy and both the rural and the industrial development policies emanated from the broader development vision of the ADLI. The philosophy behind the ADLI is that agricultural development plays a leading role in the industrialisation process by strengthening backward and forward linkages (MoFED, 2002b and Ohno, 2009). The ADLI strategy is 'an evolving development strategy subject to pragmatic experimentation and adjustment' based on the 'learning-by-doing' approach. As discussed in sub-section 4.4.1, the ADLI strategy was practised as 'Core ADLI' from the early-1990s to the early-2000s and as 'Enhanced ADLI' from the early-2000s onwards. Agriculture is regarded as the sector from which economic growth should emanate; growth in

agriculture will lead to industrial growth by offering skilled and semi-skilled labour forces as an input and increasing demand for the industrial products. The transformation of agriculture was expected to trigger structural transformation in the economy so the ADLI development strategy has targeted smallholder farms. Thus, smallholder farmers are the most important development partners in the political coalition of the Ethiopian developmental state. This indicates that the main political base of the ruling party is smallholder farmers, which account about 80% of the population; small producers in urban areas are also considered part of the support base (Ohno, 2009; Asayehgn, 2012). As discussed in section, 4.5-4.7 of chapter four the Ethiopian state looks committed to bring transformation from the bottom (grassroots level) by transforming the agriculture sector via increasing productivity and production. To realise this, the government pursued the farmers' movement known as 'developmental army building' (*Yelimat serawit ginbata* in Amharic) on the main development fronts, such as in agriculture, education and health, to enhance the role of the community in local development programmes.

Empirical evidence has confirmed that the Ethiopian economy has experienced strong and broad-based growth for more than a decade since the ruling party officially claimed the developmental state ideology. Despite some discrepancy between the figures cited by international institutions and the Ethiopian government, there is a consensus that Ethiopia has registered impressive economic growth over the past decade, and its pro-poor and-growth spending and national ownership of its developmental plans have been praised by the international community. The country has met most of the MDGs, per-capita income is rising rapidly (having almost tripled in a decade), there is a reduction in poverty levels and improved human capital development and, thus, the country plans to join the middle-income group within a decade. Even though the service and agricultural sectors have been the main drivers of structural transformation over the last decade, more recently, the manufacturing sector has also made a relative contribution to the economy due to the special attention given by the government. Given the huge public investment in infrastructure and the social-service sector, it is likely that the current economic growth will be sustained.

The growth, quality, and availability of infrastructure are essential for overall sustainable economic growth. The country has committed substantial public resources under its pro-development strategies for building basic infrastructure such as roads, railways, air transport, energy, irrigation dams, and telecommunications, to create an environment conducive for the development process. Indeed, implementing such pro-development policies has been pivotal in accelerating economic development and strengthening the national consensus on the need for sustainable development to end the vicious circle of poverty. For instance, in the energy sub-sector, hydropower, wind, solar and geothermal energy are available renewable resources and there are several energy projects under construction. Thus, the country set a target to become a key producer and exporter of power by constructing several hydroelectric dams and other alternative-energy sources. A sustained expansion of the national demand for energy, due to the boom in economic development, is crucial for the expansion of Ethiopia's energy sector, which, in turn, is vital to support the country's overall economic growth. Therefore, the expansion of the energy sector has a positive spill-over effect, supports the

overall economic growth and facilitates the transformation of the economy from being dependent on agriculture to the broader industry and service sectors.

The Ethiopian state has tried to ‘crowd-in’ the role of the private sector, which expected to play a crucial role for economic development and has formulated policies and strategies to ensure that the emerging private sector plays a vital role in the development process. For instance, the state promotes micro and small enterprises (MSEs), which are the basis for the development of medium and large-scale, indigenous private-sector enterprises. The state’s current relatively high public investment in infrastructure development and its nurturing of well-functioning institutions to improve service delivery have given rise to numerous opportunities, and created an enabling environment for the active participation of the private sector in the economy. The private sector is expected to create considerable amount of employment opportunities, and assist economic transformation by engaging in the manufacturing sub-sector using the investment incentives provide from government.

However, the private sector in Ethiopia has not yet reached the stage of playing a visible and dominant role in the economy, although there are several policy incentives and supports. It is characterised by risk-averse behaviour that prevent engagement in the productive sectors due to different pulling and pushing factors such as a lack of capability and regulation, corruption and rent-seeking practices, favoritism, and so on. Likewise, the state bureaucracy and institutions have not reached the level that to provide the required services to the private sectors in order to exert the required effort for the development process of the nation. The lack of competent bureaucracy and non-existence of well-functioning institutions at all levels are considered as the main challenges faced to the Ethiopian state. Whatever the challenges faced in practice, creating conducive business environment accompanied by macroeconomic stability are essential to attract the necessary investment (both domestic and foreign) to the intensive manufacturing sub-sectors. For instance, the amendment of Ethiopia’s investment proclamation No. 769 /2012 introduced provisions for the establishment of industrial zones, both state and private run, with favourable investment, tax, and infrastructure incentives to attract investment in key manufacturing area identified by the government. The identified priority areas in the industrial sector are textiles and garments, leather, sugar, cement, metals and engineering, chemicals, pharmaceuticals and agro-processing (FDRE, 2012). The establishment of industrial zones is expected to provide a high potential for growth, adding value to the economy and creating another enclave for international capital (FDI) to enhance the national economy. There is regular dialogue between high-level government officials and representative of the private sectors in an attempt to exploit opportunities by improving the institutional capacity and to address the real challenges/constraints faced to the private sectors.

Ethiopia’s developmental state also played a vital role in the economy by providing basic social services, investing in pro-poor and pro-growth economic sectors, and responding to market failures through its selective public investment interventions. For instance, approximately 60% (over two-thirds) of annual state expenditure is concentrated on public development projects (such as education, health, agriculture, water

supply, and roads). The provision of basic social services is geared towards benefiting the lower-income levels to narrow the gap in wealth distribution among the entire population. Therefore, government leadership (both political and bureaucratic) has tried their level of best in improving the performance of and access to basic social services (health and education sectors, water and sanitation, and extension services) by mobilising and using domestic and external sources. Investment in the social sector has a significant multiplier effect for economic growth and intergenerational benefits, and ensures the equitable distribution of resources. For instance, the *woreda* (district) level spending is pro-poor and pro-growth, focusing on health, education, agriculture and the water sectors to create access and opportunities for the community at the local level. This indicates the emerging developmental state's looks committed to strengthening the country's human capital capacity to manage resource rents and the proper utilisation of resources to diversify the economy. The empirical evidence confirmed that such substantial public investment has resulted significant improvements in human capital development. For instance, the substantial public investment in agricultural extension services has had a significant impact on raising smallholder farmers' awareness of modern farming practices in addition to their customary ones. Currently, access to basic social services is not the problem, however, the government and its stakeholders need to focus on the provision of *quality* services.

In general, Ethiopia's economic growth is considered as one of impressive economic growth around the world and it praised for its unprecedented economic growth since the ruling party officially proclaimed the developmental state as a state's ideology. The developmental state in Ethiopia shares many of the common features derived from mainstream conceptions of the developmental states but tried to adapt these common features to its own context. The political elites are relatively committed to achieve sustained economic growth and development by formulating and implementing the consecutive, five-year, mid-term development plans. Ethiopia has progressed from having one of the lowest-levels of human capital development and highest poverty rates in the world to one of better economic development over the past decade. However, this does not mean that all economic and social problems have been solved yet; further efforts are required to accelerate the socio-economic development of the nation. Likewise, the developmental state in Ethiopia is not free from challenges such as rent-seeking attitudes and practices, corruption, problems of good governance, lack of institutional capacity and capability, and weak regulation mechanisms for the private sector (as per the principle of carrot and stick), and lack of national consensus regarding all development projects. Rent-seeking and corruption pose a threat to the credibility and legitimacy of the government, and could decay its structures and capacity and caused an extensive public protest last year. As a result, the government looks aware of the problems of rent-seeking and corruption, social inequality, unemployment, lack of good governance and other socio-economic problems as major challenges/constraints to the country. For instance, as different media outlets broadcasted, the ruling party and the government decided to carry out a kind of self-evaluation, which is called a 'deep renewal' process (*tilik tehadso* in Amharic) by understanding the desire of the people demonstrates their commitment for transparency and accountability, and the people have all the rights to be heard at different levels. However, since such self-evaluation process undertaking by the ruling party and the government is not a finished business yet. The



outcome (i.e. commitment and ability to fight/address all these challenges) will be seen in the future after the process completed and needs further research whether the process bring a required outcome or not as per the request of the citizen. However, the best tool that the government had to take into consideration to stamp out corruption and rent-seeking is to strengthen the laws and to close loopholes that have become tools for cheating officials and rent- seekers. This is why because throwing people to jail alone will not solve the problem forever; rather closing all the ways that trigger officials/or individuals into these unethical practices via strengthen the laws would be considered to bring a reliable solutions.

#### **6.2.4 *Groundwater-Irrigation development and governance in Raya Valley***

This study argues that the developmental state approach is an appropriate model for many SSA countries in general, and Ethiopia in particular. The Ethiopian state officially claimed the developmental state paradigm to accelerate its development process through state intervention in resource mobilisation and utilisation. This claim did have tested in the case study of Raya Valley, and informed by the theoretical framework of the developmental state. The study found that, overall there was evidence that the Raya Valley irrigation scheme did reflect the developmental state's public investment in pro-growth and pro-rural programmes at the grassroots level. However, there were other challenges that were not adequately addressed. This research will help to refine the understanding of the developmental state approach and, specifically, the actual challenges that the Ethiopian state needs to address to realise fully its development objectives.

The Ethiopian state set ambitious goals for economic development, prioritising agriculture-based industrialisation because agriculture is considered as the backbone of the Ethiopian economy by the government. Under the long-term development strategy of the ADLI, agricultural growth is expected to spur industrialisation through its backward and forward linkages. The development of irrigated agriculture through significant public investment is one of the main pro-rural development programmes, involving the community at local level. The development of irrigation infrastructure has had both positive and negative impacts on the sustainable use of water resources. Likewise, the government policies (such as investment in irrigation infrastructure and the well-being of households) have had both direct and indirect linkages. The direct linkages operate through the production and consumption behaviour of households, while the indirect effects cover different dimensions, at the household or community level. Public investment in irrigation improves agricultural productivity and has a positive impact on household income diversification and poverty eradication. Therefore, the government wants to operationalise the long-term rural development programmes that have served as the roadmap to transform smallholder agriculture. For instance, to strengthen the capacity of irrigation, it has implemented extensive and large-scale conservation (soil and water) works to reduce soil erosion/degradation, to improve the soil's water-retention capacity, recharge the groundwater resources, and improve environmental rehabilitation. There is no doubt that conservation is critical to maintain ecological sustainability and farmers should collaborate to make the best of the natural capital and environmental services. An effective conservation programme is also important for social-capital formation, and is an essential prerequisite for a successful, widespread conservation programme.

Although rainfall is scarce in the Raya Valley, it has huge agricultural potential and has large groundwater aquifers to meet the irrigation requirements of smallholder farmers. The regional state has identified it as one of the ‘development corridors’, where productivity can be increased through the use of groundwater irrigation. Thus, the government has invested heavily in deep-well construction and a pressurised-pump irrigation system in the area. Use of groundwater for irrigation purpose is increasing rapidly, bringing several socio-economic benefits to smallholder farmers by minimise the impact of rainfall variability and seasonal drought and enabling them to grow multiple crops per season. Besides investing in the physical infrastructure, the state has invested in building the institutional and human capacity to sustain the irrigation infrastructure. Although irrigation does assure crop diversification and allows for multiple cropping, it requires proper management to meet the objectives. Management of irrigation systems is determined by the political, social, economic, and environmental contexts. Failure or sub-optimal operation of small-scale irrigation schemes is dependent on the success or failure of both infrastructure (hardware) and management (institutional factors). As discussed in section 5.10, the state encouraged the development of WUAs as local institutions to assure the sustainability and fair distribution of water resources, to minimise the government’s operational costs, and to institutionalise irrigation cost recovery (such as operation and maintenance costs) by the beneficiary farm households. Management by the WUAs is supplemented by the long-term traditional water management practices (called *abo may* or literally ‘father of the water’) of the Raya community, which address many of the disputes related to water distribution. A systematic combination of indigenous and formal institutions is very important for community co-ownership and thus the proper management of the water resources for socio-economic development and benefit of the community.

Aside from proper management of the water resource, a combination of factors such as access to credit, educated household members, input supply by cooperative associations, and access to extension services have had a positive effect on improving the performance of the irrigated farming. For instance, educated farmers have relatively greater managerial ability, are better technology adopters, and know more about how to use modern agricultural farming practices. Therefore, improving farmers’ practical educational status by expanding adult education programmes can improve agricultural practices, particularly the production efficiency of irrigated agricultural practices. In general, the groundwater irrigation development in the studied area is one of the pro-rural public investments undertaken by the state, which is considered as one of the crucial instruments for resource allocation and distribution at the grassroots level. Investment in groundwater irrigation in the studied area plays a significant role in improving the livelihoods of the beneficiary farm households, as well as increasing the supply of agricultural produce. However, the Raya Valley groundwater irrigation project is not free from challenges (see section 5.11). Therefore, the government and other stakeholders need to work with the farmers to address these observed challenges to realise the economic benefits of the groundwater potential and create further development opportunities for the community, and for regional state in general.

### 6.3 Contribution of the study

Based on the critical analysis of the mainstream conception of the developmental state literature, as well as African perspectives on the developmental state, this study confirms that the developmental state ideology is an appropriate alternative ideology to accelerate the African Renaissance. The study also shows that both the internal (as a sufficient condition) and external (as a necessary condition) environments are receptive to the adoption of a developmental state ideology in many African countries if they considering their own national economic, political and social contexts. In this regard, several countries show an interest for adopting a developmental state, and have officially called themselves a developmental state (but this requires further investigation to ascertain whether they are developmental state in practice or not).

The Raya Valley groundwater irrigation project is a good example of how the developmental state can ensure economic benefits to farm households and it laid a foundation for capital formation/accumulation from the rural agricultural sector. Moreover, the Raya Valley case study showed how the developmental state established relatively effective institutional environments and arrangements to achieve specific development projects at local level. At the local level, the institutional arrangements recognised the role of customary institutions in resolving conflicts, as well as to sustainable resource management. Therefore, the Raya Valley case study is a good example (despite the challenges) of a developmental state, which serves as a model for other development projects elsewhere in Ethiopia. Some of the good experiences are the state's commitment for rural development programme; the commitment of the rural community for natural resource conservation and management; the role of the WUAs and indigenous irrigation institutions for the governance of irrigation schemes; and how the formal and customary institutions integrated at community level to strengthen the interconnection of the farming communities.

### 6.4 Lessons to strengthen the developmental state

Although their initial economic conditions were similar in the 1960s, the development experiences of the SSA and East Asian countries show a strong divergence in economic growth and development. However, many African countries have experienced longer growth spurts in recent years, although the growth has been uneven among African countries and typically not sustained. Hence, scholars and policymakers are concerned that Africa's growth is insufficient to improve living standards for a rapidly growing population. There are concerns that in many countries policies and political conditions are not in place to sustain the current rapid economic growth, to achieve industrialisation and economic transformation, and to ensure a more equitable structure. Therefore, based on the historical and analytical arguments, this study confirms that adopting a developmental state can lead to success if there is a serious commitment from the political elites to develop the model in accordance with their own national context. This study has shown that the development experiences of the earlier developmental states are applicable in many SSA countries. This implies that the developmental state model would become a viable alternative development ideology for many African countries today to address their market failures, to promote new market opportunities and

transform capital by integrating the role of the market and the state. This implies that the African states can and must play an activist and developmental role beyond being only a facilitating actor; i.e., being little more than a servant of ‘comparative advantage’ because African states should not simply follow comparative advantage, as some would prefer. To realise this ideological/policy independence is remaining as one the crucial ingredients. Thus, prospects for building a developmental state in many African countries are open but this does not mean building a developmental state will be free from both internal and external challenges.

This analysis of the development state in this study has highlighted both the successes and failures of East Asian and SSA countries – adopting a context-fitting development model make all the difference. It is noteworthy that most of the successful economic development stories came from practicing the developmental state model in accordance with their own national contexts and the proper use of opportunities created by the international economy. This is evident from the fact that almost all earlier developmental states followed an export-oriented development strategy and transformed from subsistence agriculture to intensive high-tech industries. This shows that national politics are, indeed, crucial to the success or failure of a country. The evidence has confirmed that, in many African countries, internal political-economic factors have resulted in the failure of policy-making and the implementing processes, although external factors have also played their role. The analysis of success and failure stories provides an important lesson for policy-makers/decision-makers of many African states in general and to those who attempting to adopt a developmental state ideology in particular.

One of the important lessons derived from the success stories of the developmental states is that nurturing context-fitted institutions help to prevent the failures in policy formulation and implementation. Moreover, by mobilising and investing substantial public resources in the social sector, the developmental state can expect to play a positive role in creating the required human capital necessary for more sustainable development. Therefore, the prospected African developmental states must put human capital development at the centre of their national development agenda and design pragmatic social-sector development programmes. In addition, nurturing diverse institutions is a priority to accelerate sustainable economic transformation. For instance, as discussed under section 4.7, the Ethiopian developmental state tried to undertake a meaningful social sector development programmes for building the required human capital (skills development) to strengthening the economic development process. Another crucial lesson is that both the emerging and would be African developmental states need to pay due attention to the bilateral and multilateral regional and international cooperation because national development programmes could have significant cross-border effects within a region. Therefore, African countries need to consolidate their regional and international cooperation with new economic powerhouses in the Global South to attain mutual benefit based on a ‘win-win’ approach, free from any tied conditionalities. They also need to develop pragmatic ‘carrot’ and ‘stick’ instruments to ensure their autonomy from self-interested groups to make state–society or state–private-sector coalition/s effective and to distribute economic rents in an equitable manner.

## 6.5 Further Research

Before we proposed points for further research, based on the discussions and synthesis (given the diversity and exceptionality of countries) the following points are forwarded for reinforcing and strengthening the developmental state model throughout Africa:

- The challenge for African policy-makers is how to rehabilitate the state where it has collapsed, and to design policies that help to achieve political stability and sustainable economic development. Then, African states that need to struggling to bring about sustainable development should design inclusive development policies/strategies that consider their socio-economic and political contexts; though policy making is a highly complex process that involving different ideas, interests, economic forces and structures that cannot be reduced to a single explanation .
- Attention should be paid to building well-functioning institutions that engender an innovative and responsive bureaucracy, which allows for the broader participation of the private sector and civil society organisations.
- The capacity of public institutions, particularly the state bureaucracy, is crucial to development performance in a developmental state. The bureaucracy advises the political executive, formulates, and implements public policies. Hence, to build successful developmental states, African countries must build transformative institutions and, most importantly, a competent and professional bureaucracy.
- To design and implement the development policies and strategies, the political leadership, the private sector and civil society need to cooperate with the state bureaucracy and institutions to legally influence the direction of the development process and contribute their share to development.
- It is possible for countries to borrow experiences from the earlier developmental states, but these should be adapted to the African experience and the specific situation of each country. The search for a similar development perspective based on successful experiences from elsewhere and adapted to condition on the respective countries is essential and common practice.
- Ethiopia has made considerable economic progress since it adopted the developmental state ideology, but the state is challenged in its move forward by both internal and external factors. It needs to address the capability and political neutrality of the state bureaucracy and widespread corruption and rent-seeking practices.
- Although the Raya Valley groundwater irrigation system is in success, the following points need to pay attention to address by government and other stakeholders. These include some of the wells are not fully functional due to deficiencies in electrical supply. Extension services lacked integration with the indigenous agronomic farming practices due to lack of quality and capacity of service providers, and the existence of fragmented output markets pose risks to the smallholder farmer due to the perishable nature of the products and weak post-harvest handling mechanisms. Finally, mechanical failure and the absence of spare parts and technicians in the project area could pose problems, lack of institutional stability associated with frequent changes of responsibilities and staff turnover at district and village

levels, as well as the WUAs lacked capacity to manage the irrigation schemes as required. Therefore, the government and its institutions should pay due attention for institutional stability and build the capacity of the WUAs; and emphasis will be given for the integration of both formal and indigenous institutions to ensure equity in distribution and sustainability of water resource.

Following the above conclusions, this study proposes that the developmental state ideology would be an appropriate alternative development model for many African countries to address their rent-seeking political-economy, which is one of the critical development challenges throughout the continent. Grounding acceptance by establishment ‘market failure’ advocates of the maladjustments and market-distorting intervention of developmental states, there is renewal, empirical record of demonstrated success, and practical experimentation that denies the voices and false prophecies of the ‘impossibility’ arguments. The discourses related to the developmental state in Africa is fiercely contested in scholarly and policy circles, but the identity and materiality of the developmental state under conditions of hyper-liberalising/globalizing processes, further research is necessary to assess the significance of the developmental state model by employing case studies from select African countries; and underscoring their diversity, heterogeneity and exceptionality. This should obviously be tested further alternative development paradigms, including the predominant/established one. Furthermore, it needs further research by adding more cross-cases from these African countries called themselves as a developmental state to arrive at a more comprehensive conclusion about the feasibility of the developmental state ideology to disprove the impossibility argument from an African perspective. It is apparent that democracy is a necessary (though not sufficient) condition to accelerate the development process in African countries – but it is always historically contingent, and requires more deep reflection and thought.



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## **APPENDIX-A: HOUSEHOLD SURVEY QUESTIONNAIRE**

**STELLENBOSCH UNIVERSITY**  
**FACULTY OF ECONOMICS AND MANAGEMENT SCIENCE**  
**SCHOOL OF PUBLIC LEADERSHIP (SPL)**  
**Household Survey Questionnaire**

Dear respondent,

This questionnaire is designed to assess information for the study entitled as *The Role of the Developmental State in Northern Ethiopia's Raya Valley Groundwater Irrigation Project: An Institutional Economics Perspective*. The work is part of a requirement for the award of Doctor of Philosophy (PhD) at the University of Stellenbosch, South Africa. The general objective of this study is to assess how the developmental state paradigm has determined the institutional environment and arrangements for achieving economic development in Africa. A case study of the groundwater irrigation system in Raya Valley region is used to examine the potential and the limitations of institutional environments/arrangements related to resource utilisation and management. The information obtained used only for this purpose. Thus, your genuine and honest response is of paramount importance for the success of the study. The researcher kindly requests your cooperation in so doing. Please be sure that, any information you provide will keep confidential and purely used for the purpose of this study.

Thank you!

**A. General information about the respondent**

|                                                 |                                      |  |
|-------------------------------------------------|--------------------------------------|--|
| Respondent's name and address (in Block letter) |                                      |  |
| A1                                              | Respondent ID                        |  |
| A2                                              | Name of the respondent               |  |
| A3                                              | Woreda in which the respondent lives |  |
| A4                                              | Tabia in which the respondent lives  |  |
| A5                                              | Kushet in which the respondent lives |  |

**B. General information about the interviewer**

|                                           |                            |  |
|-------------------------------------------|----------------------------|--|
| Interviewer information (in Block letter) |                            |  |
| B1                                        | Tabia code                 |  |
| B2                                        | Name of the interviewer    |  |
| B3                                        | Date of interview          |  |
| B4                                        | Starting time of interview |  |
| B5                                        | Ending time of interview   |  |

**C. Household characteristics and household's socio-economy condition**

- Gender of the respondent: [1] Male [2] Female
- Age of the respondent in years: -----
- Respondent's educational level: [1] Illiterate [2] Religious [3] Primary school  
[4] Secondary school [5] above secondary school
- Household's marital status: [1] Married [2] Single [3] Divorced [4] Widowed
- How many people live in the household now (family status)

|                    |         |           |             |               |
|--------------------|---------|-----------|-------------|---------------|
| 1.Number of family | 2. Male | 3. Female | 4.Dependent | 5.Independent |
|                    |         |           |             |               |

- Type of house you have  
[1] Grass roofed (Sar biet)  
[2] Corrugated iron roofed (own korkoro)  
[3] Rented Corrugated iron roofed (rented korkoro)  
[4] Family inherited Corrugated iron roofed or grass roofed  
[5] Other specify-----
- From what sources does the household receive its income?  
[1] Farming income [2] none farming income (petty trade)  
[3] Livestock and livestock products [4] Daily labour  
[5] Remittance from outside the household [6] Food for work (PSNP)  
[7] Selling charcoal, firewood and others [8] other specify-----

8. Do any members of the family have participated on non/off farm activities?

[1] Yes

[0] No

9. If yes, in what activities have participated?

[1] Working on other people's farm

[2] Working in other people's business

[3] Handicrafts

[4] Small business

[5] Food for work

[6] Urban daily labour

[7] Other specify-----

10. Can you please tell us the source and amount of income you received last year, 2013?

|   | Source of income <b>0</b>        | Unit <b>1</b> | Amount <b>2</b> | Value ( in Birr) <b>3</b> |
|---|----------------------------------|---------------|-----------------|---------------------------|
| a | Rain-fed Agriculture             |               |                 |                           |
| b | Irrigated Agriculture            |               |                 |                           |
| c | Livestock and livestock products |               |                 |                           |
| d | Off-farm employment              |               |                 |                           |
| e | Transfers( Remittance)           |               |                 |                           |
| f | Self-employment ( trade)         |               |                 |                           |
| g | Other                            |               |                 |                           |

**NB:** Off-farm employment includes safety net, daily employment...

11. Durable asset ownership

|   | Type <b>0</b>         | Amount(number owned) <b>1</b> | Value (Birr) <b>2</b> |
|---|-----------------------|-------------------------------|-----------------------|
| a | Farm equipment(Tools) |                               |                       |
| b | House Assets( Biet)   |                               |                       |
| c | Other                 |                               |                       |

12. In your household how many of these items do you have?

|   | Items <b>0</b>      | Quantity <b>1</b> | Value at current market price( in Birr) <b>2</b> |
|---|---------------------|-------------------|--------------------------------------------------|
| a | Radio               |                   |                                                  |
| b | watch               |                   |                                                  |
| c | Mobile phone        |                   |                                                  |
| d | Tape recorder       |                   |                                                  |
| e | Television          |                   |                                                  |
| f | Table               |                   |                                                  |
| g | Chair               |                   |                                                  |
| h | Bed                 |                   |                                                  |
| i | Improved fuel stove |                   |                                                  |
| j | other specify       |                   |                                                  |

## 13. Livestock (animal) assets owned in your household

|   | Animal Type<br><b>0</b> | Holding before<br>Irrigation started <b>1</b> | Bought after<br>irrigation started <b>2</b> | Currently<br>owned(total) <b>3</b> | Estimated value<br>( in Birr) <b>4</b> |
|---|-------------------------|-----------------------------------------------|---------------------------------------------|------------------------------------|----------------------------------------|
| a | Oxen                    |                                               |                                             |                                    |                                        |
| b | Bulls (Tefin)           |                                               |                                             |                                    |                                        |
| c | Cows                    |                                               |                                             |                                    |                                        |
| d | Heifer (Arhi)           |                                               |                                             |                                    |                                        |
| e | Sheep                   |                                               |                                             |                                    |                                        |
| f | Goats                   |                                               |                                             |                                    |                                        |
| g | Donkeys                 |                                               |                                             |                                    |                                        |
| h | Mules/Horse             |                                               |                                             |                                    |                                        |
| i | Cart (Gari)             |                                               |                                             |                                    |                                        |
| j | Camels                  |                                               |                                             |                                    |                                        |
| k | poultry                 |                                               |                                             |                                    |                                        |
| l | Beehives                |                                               |                                             |                                    |                                        |
| m | Other                   |                                               |                                             |                                    |                                        |

14. Do you have land to cultivate? [1] Yes [0] No

15. If yes, how do you get the land? Through:

[1] Land distribution

[2] Family inheritance

[3] Share cropping

[4] Fixed rent

[5] Lease from Government

[6] Others Specify-----

## 16. Land arrangement of the farm household

|   | Type of land <b>0</b> | Rain-fed (in tsimad) <b>1</b> | Irrigated (in tsimad) <b>2</b> |
|---|-----------------------|-------------------------------|--------------------------------|
| a | Own                   |                               |                                |
| b | Shared crop in        |                               |                                |
| c | Rented in             |                               |                                |
| d | Total                 |                               |                                |
| e | Shared crop out       |                               |                                |
| f | Rented out            |                               |                                |
| g | Total                 |                               |                                |

17. What type of soil is on the rain-fed and irrigated land that your household owns now?

|   | Soil type <b>0</b> | Rain-fed (in tsimad) <b>1</b> | Irrigated (in tsimad) <b>2</b> |
|---|--------------------|-------------------------------|--------------------------------|
| a | Hutsa/Leptosol     |                               |                                |
| b | Baekel/Cambisol    |                               |                                |
| c | Walka/Vertisol     |                               |                                |

|   |               |  |  |
|---|---------------|--|--|
| d | Keyih/Luvisol |  |  |
| e | Mixed type    |  |  |

18. Did you have enough food to cover all your needs since using groundwater irrigation?

[1] Yes [0] No

19. According your local standards, do you consider your household to be?

[1] Rich [2] Medium [3] Poor

20. The household distance to basic institutional services from his/her residence.

|   | Type of institutions <b>0</b>     | Distance in Km. <b>1</b> | Time taken for one trip(in hour or minute) <b>2</b> |
|---|-----------------------------------|--------------------------|-----------------------------------------------------|
| a | Local-Market                      |                          |                                                     |
| b | Woreda-Market                     |                          |                                                     |
| c | Nearest health centre             |                          |                                                     |
| d | Nearest health post               |                          |                                                     |
| e | Hospital                          |                          |                                                     |
| f | Elementary school                 |                          |                                                     |
| g | Secondary school                  |                          |                                                     |
| h | Grain mill (Methan)               |                          |                                                     |
| i | Farmer's training centre          |                          |                                                     |
| j | Farmer's cooperative centre       |                          |                                                     |
| k | Veterinary centre                 |                          |                                                     |
| l | Social court (Mahberawi firdbiet) |                          |                                                     |
| m | Court (Woreda firdbiet)           |                          |                                                     |
| n | Other institutions                |                          |                                                     |

21. Do you have ever participated in the free community work Programme every year?

[1] Yes [0] No

22. If your answer is yes for the above question, in which activities have you participated.

- [1] Building irrigation infrastructure such as in water diversion structures
- [2] Building/improving rural roads such URAP
- [3] Compost preparation (Composting)
- [4] Soil and water conservation activities such as stone bunds or trenches or planting trees
- [5] Shallow well ('Ella' or 'Horeye') digging for crop or vegetable production purpose
- [6] Shallow well ('Ella' or 'Horeye') digging for livestock purpose
- [7] Fencing school, health centre, FTC and other institutions
- [8] Toilet Construction
- [9] Other, please describe-----



23. Who helped your community to undertake the activities mentioned in question 22?

- |                                         |                                            |
|-----------------------------------------|--------------------------------------------|
| [1] Local government (Woreda and Tabia) | [2] Regional government                    |
| [3] Federal government                  | [4] Productive Safety Net Programme (PSNP) |
| [5] Relief Society of Tigray (REST)     | [6] World Vision                           |
| [7] Other Ethiopian NGO                 | [8] other international NGO                |

**D. Networks and servicing; access to Training, extension/inputs and credit servicing**

24. In which of the following community organizations is your household is a member?

|   | Community organization <b>0</b>           | <b>1=Yes</b> <b>2= No</b> | Since when <b>3</b> |
|---|-------------------------------------------|---------------------------|---------------------|
| a | Farmer's association                      |                           |                     |
| b | Women's association                       |                           |                     |
| c | Youth association                         |                           |                     |
| d | Farmers' cooperative association          |                           |                     |
| e | Iddir/ kerie/ funeral association         |                           |                     |
| f | Eqquab/ rotating savings and credit group |                           |                     |
| g | Mahaber/ feast days association           |                           |                     |
| h | Livestock sharing group                   |                           |                     |
| i | Theft prevention group                    |                           |                     |
| j | Community risk prevention pool            |                           |                     |
| k | Community care coalition                  |                           |                     |
| l | Other                                     |                           |                     |

25. Have you ever received training related to Groundwater irrigation utilization and other agricultural extension services?

- [1] Yes                      [0] No

26. If your answer is yes for the above question, please give us the following information

|   | Type of training |
|---|------------------|
| a |                  |
| b |                  |
| c |                  |
| d |                  |

**Code of training**

| <u>I. Agriculture</u>                    | <u>II. Storage/Marketing</u>                  | <u>III. Natural resource conservation</u>               |
|------------------------------------------|-----------------------------------------------|---------------------------------------------------------|
| 1. Crop and Vegetable production         | 6. Post-harvest handling                      | 9. Water and soil conservation                          |
| 3. Fertiliser applications/utilization   | 7. Marketing and information                  | 10. environmental protection and agro-forestry practice |
| 3. Compost preparation                   | 8. Saving and proper utilization of resources | 11. Other specify                                       |
| 4. Irrigation utilization and management |                                               |                                                         |
| 5. Improved animal breeding              |                                               |                                                         |

27. From which institution did you receive the trainings?

[1] Government (Regional or Woreda or Tabia) [2] Associations (farmer, youth, women)

[3] Farmer's cooperative association [4] DECSI/REST

[5] PSNP project [6] other-----

28. Do you think your current training is enough to transform the traditional agricultural practices and sustainably use the groundwater irrigation system? [1] Yes [0] No

29. Do you have access for extension service? [1] Yes [0] No

30. If your answer is yes, for what purpose you contact the extension service providers.

[1] To get advice on fertiliser utilization [2] To get advice on farm preparation

[3] To get advice on irrigation resource utilization [4] To get advice on output marketing issue

[5] To get advice on new seed varieties [6] To get advice on credit & saving services

[7] To get advice on pest and insect infestation [8] To get general advice on agriculture

[9] To get advice on improved animal production [10] Other-----

31. Which sets of agricultural technologies are being used?

[1] Fertiliser application [2] Improve crop/vegetable varieties

[3] Other chemicals application [4] Improved animal breeds

[5] Crop and animal mix technologies [6] others specify-----

32. From where did you get these agricultural sets of technologies?

[1] Agriculture office [2] Farmer's cooperative associations

[3] Agricultural research institution [4] Model farmers in the village

[5] Others specify-----

33. How did your household pay for the inputs into farming that used during last year (2013) growing seasons?

[1] I had enough cash saved to buy inputs [2] I borrowed money [3] I borrowed inputs

[4] I had s to sell livestock to buy inputs [5] I had to sell farm outputs to buy inputs

[6] I had to use safety net payments [7] Other-----

34. What is your opinion of the agricultural extension services in your Tabia?

[1] Very helpful [2] Somewhat or moderately helpful [3] Not helpful

35. Have you taken any group or individual credit/loan as a household last year, 2013?

[1] Yes

[0] No

36. If your answer is yes for question no.35, could you please give us the following information?

|   | Source of credit <b>1</b> | Purpose of credit <b>2</b> | Amount ( in Birr) <b>3</b> |
|---|---------------------------|----------------------------|----------------------------|
| a |                           |                            |                            |
| b |                           |                            |                            |
| c |                           |                            |                            |
| d |                           |                            |                            |
| e |                           |                            |                            |
| f |                           |                            |                            |

|                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                          |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p><b>Source:</b></p> <p>1=DECSI/REST</p> <p>2=Bureau of Agriculture</p> <p>3. Association (Farmers, Women, Youth)</p> <p>4= Farmers' Cooperative association</p> <p>5=PSNP plus program</p> <p>6=Relative(Neighbour)</p> <p>7=Town trader</p> <p>8=Local money lender</p> <p>9=other, specify</p> | <p><b>Used/purpose:</b></p> <p>1=Fertiliser, insecticide and pesticides/ purchased</p> <p>2=Better seeds/ purchased</p> <p>3=water pump/ purchased,</p> <p>4=livestock/ purchased,</p> <p>5=Household consumption (food, educational...)</p> <p>6=Construction of house,</p> <p>7=Loan repayment,</p> <p>8=Social festivities (weeding, teskar, mahber...)</p> <p>9= others, specify</p> |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

37. Have you had any problem in accessing credit from the credit institutions in your locality?

[1] Yes

[0] No

38. If yes, what was/were the main constraint(s)?

[1] Unavailable on time

[2] Lack of collateral

[3] Lack of credit institutions

[4] High interest rate

[5] other specify-----

39. What do you think of the institutions that provide credit services to you and your community?

[1] Very beneficial

[2] Somewhat or moderately beneficial

[3] Not beneficial

### **E. Groundwater irrigation system servicing**

40. For how many years you are using groundwater irrigation system.

[1] 1-2 years

[2] 2-4 years

[3] 4-6 years

[4] More than 6 years

41. Which of the following crop/vegetable patterns mostly produce using groundwater irrigation?

[1] Maize

[2] Teff

[3] Barley

[4] Tomato

[5] Onion

[6] Pepper

[7] Cabbage

[8] other specify-----

42. How many hectare of land cultivated using groundwater irrigation scheme (on average)?

[1] 0.25      [2] 0.5      [3] 1      [4] 1.25      [5] 1.5      [6] 2 and more than 2

43. Main input costs for groundwater irrigation cultivation in 2013/14 for each season.

|   | Input type <b>0</b>             | First Season <b>1</b><br>(Total cost incurred in Birr) | Second season <b>2</b><br>(Total cost incurred in Birr) |
|---|---------------------------------|--------------------------------------------------------|---------------------------------------------------------|
| a | Seed cost (for crop& vegetable) |                                                        |                                                         |
| b | Fertiliser                      |                                                        |                                                         |
| c | Pesticide                       |                                                        |                                                         |
| d | Insecticide(fungicides)         |                                                        |                                                         |
| e | Land rent (if any)              |                                                        |                                                         |
| f | Hired labour (daily labour)     |                                                        |                                                         |
| g | Rented oxen (if any)            |                                                        |                                                         |
| h | Harvesting                      |                                                        |                                                         |
| i | Electricity ( power charge)     |                                                        |                                                         |
| j | Others                          |                                                        |                                                         |

44. Type of crop/vegetable pattern produced and income generated using groundwater irrigation in 2013/14 of first season.

|   | Crop type <b>0</b> | Cultivated land<br>(in ha.) <b>1</b> | Yield per ha<br>( in Quintal) <b>2</b> | Total<br>yield <b>3</b> | Price<br>/Quintal <b>4</b> | Total income<br>(in Birr) <b>5</b> |
|---|--------------------|--------------------------------------|----------------------------------------|-------------------------|----------------------------|------------------------------------|
| a | Maize              |                                      |                                        |                         |                            |                                    |
| b | Teff               |                                      |                                        |                         |                            |                                    |
| c | Barley             |                                      |                                        |                         |                            |                                    |
| d | Pepper             |                                      |                                        |                         |                            |                                    |
| e | Tomato             |                                      |                                        |                         |                            |                                    |
| f | Onion              |                                      |                                        |                         |                            |                                    |
| g | Cabbage            |                                      |                                        |                         |                            |                                    |
| h | others             |                                      |                                        |                         |                            |                                    |
| i | Total              |                                      |                                        |                         |                            |                                    |

45. Crop/vegetable pattern produce and income using ground water based irrigation in 2013/14 of the second season.

|   | Crop type<br><b>0</b> | Cultivated land<br>(in ha.) <b>1</b> | Yield per ha<br>( in Quintal) <b>2</b> | Total<br>yield <b>3</b> | Price<br>/Quintal <b>4</b> | Total income<br>(in Birr) <b>5</b> |
|---|-----------------------|--------------------------------------|----------------------------------------|-------------------------|----------------------------|------------------------------------|
| a | Maize                 |                                      |                                        |                         |                            |                                    |
| b | Teff                  |                                      |                                        |                         |                            |                                    |

|   |         |  |  |  |  |  |
|---|---------|--|--|--|--|--|
| c | Barley  |  |  |  |  |  |
| d | Pepper  |  |  |  |  |  |
| e | Tomato  |  |  |  |  |  |
| f | Onion   |  |  |  |  |  |
| g | Cabbage |  |  |  |  |  |
| h | others  |  |  |  |  |  |
| i | Total   |  |  |  |  |  |

46. Have you cultivated the total of your irrigable land (plot) since you started irrigation practices?

[1] Yes [0] No

47. If your answer is no, what are the basic reasons that have not cultivated your total plot?

[1] Lack of awareness regarding using modern irrigation technology

[2] Shortage of family labour and oxen for ploughing

[3] Lack of capacity to have agricultural inputs

[4] Lack of credit to purchase agricultural inputs

[5] Other-----

48. Did you ever get the required support on how to using/manage groundwater irrigation system?

[1] Yes [0] No

49. If yes, what type of support did you ever get?

[1] Training servicing [2] Credit servicing [3] Technology (inputs)

[4] Rural infrastructures [5] Expertise (extension support) [6] Marketing assistance

[7] Crop diversification [8] Maintenance and operation [9] other services-----

50. Who decide the type of crops/vegetables to grow on your groundwater irrigated land (plot)?

[1] Myself (the household) [2] Tabia administration

[3] Cooperatives associations [4] Development Agent

[5] Woreda administration (agricultural bureau) [6] Regional government

[7] Other-----

51. Do you think that groundwater irrigation scheme is/will contribute to improve the living condition of the beneficiary farm households?

[1] Yes [0] No

52. Do you think that groundwater irrigation could be the source of pollution/water borne diseases such as Mosquito?

[1] Yes [0] No

53. If yes please specify the types of water pollution/ borne diseases?-----

-----  
-----

54. Do you believe that what you are producing at present using groundwater irrigation system is most profitable?

[1] Yes

[0] No

55. If your answer for the above question is yes, which of the products do profitable?

[1] Vegetables

[2] Cereals/crops

[3] Fruits

[4] Other, specify

56. If your answer is vegetables, why you prefer production of vegetable? Due to:

[1] Easiest to cultivate

[2] Better income than crops

[3] Better yield than crops

[4] Better diseases tolerance

[5] Other-----

57. If you think that your present activity is not most profitable, what are the main problems?

[1] Lack of enough water in the scheme

[2] Lack of extension services

[3] Lack of transportation facilities

[4] Lack of supply of agricultural inputs on time

[5] Lack of supply of improved seeds

[6] Less access of market

[7] Lack of knowledge/information

[8] Lack of credit servicing

[9] Other specify-----

58. Which cost of inputs highly affects to become more profitable/productive using groundwater irrigation system?

[1] Cost of electricity/power

[2] Cost high yield variety seeds

[3] Cost of fertiliser

[4] Cost of chemicals

[5] Cost of hired labour forces

[6] Cost of maintenance

[7] Other costs-----

59. Do you have faced problem of:

|   |              |   |                |   |                           |
|---|--------------|---|----------------|---|---------------------------|
| 1 | Storage      | 2 | Transportation | 3 | Marketing of your produce |
|   | [1]Yes [0]No |   | [1]Yes [0]No   |   | [1]Yes [0]No              |

60. Do you have ever faced constraints related to access to market for your output?

[1] Yes

[0] No

61. If yes, what is/are the main constraint(s)?

[1] Unable to get market information

[2] Far distant of market place from the farm place

[3] High transportation costs

[4] Lack of transportation

[5] Market (price) fluctuation

[6] other specify-----

62. Where did you sell your agricultural products?

|   | Location <b>0</b> | Distance (in Km) <b>1</b> | One way travel in hour or minute <b>2</b> |
|---|-------------------|---------------------------|-------------------------------------------|
| a | At farm gate      |                           |                                           |
| b | Local market      |                           |                                           |
| c | Woreda market     |                           |                                           |
| d | Zonal market      |                           |                                           |



|   |                       |  |  |
|---|-----------------------|--|--|
| e | Regional market       |  |  |
| f | Other market location |  |  |

63. Do you have a customer to whom you supply your agricultural product?

[1] Yes [0] No

64. If yes, to whom do you sell your products?

[1] Consumer [2] Whole seller [3] Retailer

65. Who administrate this groundwater irrigation infrastructure?

[1] Tabia administration [2] Development agents  
 [3] Regional government [4] Woreda administration  
 [5] Beneficiary farm households (community) [6] Federal government  
 [7] Both community and government (co-ownership) [8] other specify-----

66. Do you have users' cooperative association/ water committee in your groundwater irrigation scheme?

[1] Yes [0] No

67. If your answer is yes for the above question, how do you elect member of the committee?

[1] By general meeting of user farm households [2] Appointed by Tabia administration  
 [3] Appointed by woreda administration [4] Appointed by regional government

68. How do you evaluate the performance your groundwater irrigation users' cooperative committee with regard to the following functions?

|   | Criterion 0                                   | 1= Poor 2=Good 3=Very good |
|---|-----------------------------------------------|----------------------------|
| a | Leadership/fairness                           |                            |
| b | Water resource mobilization and distribution  |                            |
| c | Infrastructure maintenance                    |                            |
| d | Control and maintain irrigation equipment     |                            |
| e | Accountability, responsibility & transparency |                            |
| f | Other activity                                |                            |

69. Is there any rules and regulation in your groundwater irrigation system utilization?

[1] Yes [0] No

70. Do you pay any electric charge fees for using groundwater irrigation scheme?

[1] Yes [0] No

71. If you pay fees for electricity, could you please tell us your amount of payment per season?

|   | Year 0  | Total seasonal payment (In Birr) |                 | Yearly payment<br>(first + second season) 3 |
|---|---------|----------------------------------|-----------------|---------------------------------------------|
|   |         | First season 1                   | Second season 2 |                                             |
| a | 2013/14 |                                  |                 |                                             |

72. Do you have contributed for the maintenance and operation of your groundwater irrigation infrastructure project?

[1] Yes

[0] No

73. If your answer is yes for the above question in which kind do you have contributed?

[1] Money

[2] Labour force

[3] Material/capital

[4] Advising/ mobilization

74. Have you ever faced any constraints when using groundwater irrigation system for your farming activities?

[1] Yes

[0] No

75. If yes, what are the major constraints?

[1] Lack of enough water in the scheme

[2] Lack of labour force

[3] Lack of credit

[4] Lack of extension services

[5] Lack of transportation facilities

[6] Lack of supply of agricultural inputs on time

[7] Lack of supply of improved seeds

[8] Less access of output market

[9] Lack of knowledge/information

[10] High electric cost

[11] Other constraints-----

76. Indicate how frequently you have used the following institutions to get any support for your irrigated agricultural practice.

|   | Institutions <b>0</b>               | <b>1=Always   2=Once in a season   3=Some times</b> |
|---|-------------------------------------|-----------------------------------------------------|
| a | Tabia administration                |                                                     |
| b | Woreda Water resource office        |                                                     |
| c | Woreda agricultural office          |                                                     |
| d | Farmers' cooperatives association   |                                                     |
| e | Farmers Training Center(FTC)        |                                                     |
| f | Credit & saving institution (DECSI) |                                                     |
| g | Agricultural Research Center        |                                                     |
| h | NGOs existing in the area           |                                                     |
| i | Private input suppliers             |                                                     |
| j | Neighbours/Friends                  |                                                     |
| k | Others (specify)                    |                                                     |

77. Have you ever faced constraints in using any agricultural inputs for your irrigated plot?

[1] Yes

[0] No

78. If yes, what is /are the main constraint(s)?

[1] Poor quality of seed and chemicals

[2] Less Extension support/services

[3] Unavailable inputs on time

[4] Source from far distance

[5] High transportation cost

[6] other specify-----

79. Please tell us the basic benefit attained from using groundwater irrigation system in terms:

- |                                            |                                                      |
|--------------------------------------------|------------------------------------------------------|
| [1] Food self-sufficiency                  | [2] Improved farming practices                       |
| [3] Improve levels of savings              | [4] fully employed on own farming                    |
| [5] Improving food composition             | [6] Better access to agricultural extension services |
| [7] Building new and better house          | [8] Improved income level of the household           |
| [9] Better access to marketing services    | [10] Improved the health status of the household     |
| [11] Receive better social status          | [12] Purchasing additional livestock/asset           |
| [13] Better access to training opportunity | [14] Other-----                                      |

**Thank you for your precious time!**